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THE GENESIS OF THE CRITICAL PHILOSOPHY.

III. Psychological.

CRITICAL philosophy then, in Kant's own case at least, is the result of the sceptical or dialectical method. Of course, Kant's philosophical status at the time he began to practise this method seriously was also an essential condition. It was, as we have seen, that of a man drifting moodily and defiantly into the shoals and quicksands of empiricism with eyes turned longingly to the haven of rationalism toward which a strong permanent under-current tended to draw him. Scarcely had he given to the world his most sceptical works than he wrote for his own eye alone: "I still thought I should find the method of enlarging dogmatical knowledge through pure reason."[1] The next development of his thought, whatever it may be, must take up and reconcile these contradictory moments of rationalism and empiricism. But that is quite consistent with the contention that it was brought about by his insight into, and endeavor to overcome, the dialectic of reason. "Reason bases an assertion upon a universally acknowledged principle, and from another principle just as certain she proves by unimpeachable demonstration the opposite of that assertion." This astonishing phenomenon was the moving impulse to Kant's further development. He regarded it as a "decisive experiment which could not fail to bring

[1] *Reflexionen*, no. 3, *op. cit.* II, 4.

to light the error that lay concealed in the assumptions of reason."[1] To discover that error was the ultimate purpose of the 'sceptical method,' which is totally different from scepticism. The latter undermines the foundation of all knowledge, in order, if possible, to leave nothing trustworthy and certain anywhere. "The sceptical method, on the contrary, aims at certainty, because, while watching a contest which on both sides is carried on honestly and intelligently, it tries to discover the point where the misunderstanding arises, in order to do what is done by wise legislators, namely, to derive from the embarrassments of judges in lawsuits information as to what is imperfectly, or not quite accurately, determined in their laws."[2] What, then, is the inaccuracy, the immanent error, that leads reason into contradiction with itself? Kant had grappled for many years with the embarrassments, the antinomies, that resulted from this error. He noticed, in time, that they all arose in connection with the dogmatic attempt to derive philosophical knowledge from notions and principles, which had long been in possession of reason, without examination into their nature and validity.[3] The third, fourth, and sixth 'Reflections' record the slow dawn of the first glimmerings of light. "It was a long time before I found in this way [*i.e.*, by the sceptical method] the whole dogmatic theory dialectical. But I was in quest of something certain, if not in regard to the object, still in regard to the nature and the limits of this [dogmatic] kind of knowledge. I found by degrees that many of the principles (*Sätze*) which are regarded as objective are in reality subjective, *i.e.*, they contain the conditions under which alone we see into or comprehend the object. . . . Before the inaugural dissertation [1770] I already had the idea of the influence of the subjective conditions of knowledge upon the objective."[4] But this insight is identical with the discovery in 1769 of that "illusion of the understanding" out of which the antinomies sprang. The illusion is the universal and unavoidable assumption (common alike to dogmatists and sceptics) that the objects of our perception are the things-in-themselves, and that the principles

[1] *Prolegomena*, § 52[b] (IV, 88 (135)).
[2] III, 303 (366).
[3] III, 27.
[4] *Reflexionen*, II, 4–5.

of their connection are valid, not only within experience, but of things-in-themselves as well.[1] And Kant's insight is the revolutionary "discovery of the true constitution of things as objects of the senses," as phenomena or appearances to us, not noumena or things-in-themselves. As the supposition that the world of sense was the things-in-themselves engendered the antinomies, which forced him to reconsider his starting-point, so the discovery thus made of the true nature of objects as appearances enabled him to solve the antinomies and vindicate the unity of reason.[2] But Kant does more than allay the contradictions so long agitated by his sceptical method. Not only is the 'everlasting nay' left behind, but the 'everlasting yea' is already in his grasp. For it is in virtue of this discovery of the influence of "the subjective conditions of knowledge" upon the constitution of the object that Kant claims for himself the super-eminent position of a Copernicus in philosophy. And, in fact, the great *Critique*, at least on its constructive side, is simply devoted to the determination of those *a priori* elements which the mind brings into every act of perception, and with which it enwraps objects and turns them into phenomena of its own. The insight, therefore, into the activity of the subject as co-creator of the object, by which the antinomies of reason were solved, is also the beginning of that critical philosophy which marks a Copernican epoch in the history of human thought. Accordingly, it is not too much to say that the antinomies were the occasion or condition of the *Critique of Pure Reason*. "By its own self-contradiction reason was compelled to search for the illusion out of which the contradiction arose and for the means of removing it. This could be done only by a complete critique of the entire faculty of pure reason. Hence the antinomy of pure reason is in fact the most beneficent perplexity (*Verirrung*) into which the human reason could by any possibility have fallen."[3] Without the antinomies there would have been no discovery of the phenomenal character of the object. This doctrine is called 'transcen-

[1] *Prolegomena*, §52 (IV, 87 (134)).
[2] III, 356 (439).
[3] *Kritik der praktischen Vernunft*, I, Th. II, B. I Hptst. (V, 112–113).

dental idealism' in the *Critique of Pure Reason*, where it appears as a corollary to the 'transcendental æsthetic' and the presupposition of the 'transcendental logic.' But Kant's first proof was the indirect one, by means of the antinomies. And to this he sometimes reverts even after the publication of the *Critique*. Thus, in the pamphlet against Eberhard, he says: "This doctrine [transcendental idealism] can be proved independently of the deduction of space and time, whose ideality is thus established before being inferred from their own inner constitution."[1] That is to say, transcendental idealism, instead of being inferred as a corollary from the metaphysical exposition of space and time given in the 'transcendental æsthetic,' may be reached by an indirect proof based upon the antinomies, and, thus grounded, it warrants an inference to the ideality of space and time. What is conclusion in one demonstration is premise in the other, and conversely.

Whether, however, Kant reached his phenomenalism as an hypothesis to explain the antinomies, or as an inference from the ideality of space and time, is not a question of so great moment as the underlying psychological doctrine without which neither of the discoveries could possibly have been made and which, henceforth, is always closely associated with them. This is the new doctrine of the radical distinction between sense and understanding. By rationalists, sense had always been regarded as a kind of reason, differing from it only by its chaotic obscurity; and by empiricists, reason had been treated as a complex derivation from sense. Hitherto, Kant had inclined now to the one and now to the other of those views, without, however, completely identifying himself with either. The essential characteristic of his philosophical transformation in the year 1769, the characteristic which explains all other phases, is his rejection of these alternatives and his mediation between them by a recognition of sense and understanding as coördinate, but fundamentally opposed, faculties of knowledge. This was the focus through which the divergent philosophical aspirations and tendencies with which he had

[1] VI, 59. To the same effect is the Preface to the second edition of the *K. d. r. V.*, III, 19–21 with the three notes.

so long been charged, radiated in new directions and with new results. The distinction between appearances and things-in-themselves was as old as the philosophy of Plato; and the ideality of space and time had long been the common property of both empiricists and rationalists. Both had served only as a ground of lamentation for the narrowness of human knowledge. But Kant's new doctrine of the equality and opposition of sense and understanding enabled him to find in these old doctrines the condition and guarantee of that *a priori* knowledge of objects which seemed to him the chief question of philosophy. It is perfectly natural, therefore, that in his letter to Bernoulli,[1] which gives a short sketch of his development in those years, he should have mentioned as starting point the antinomies, and as goal the discovery of the radical distinction between sense and understanding. If it was the antinomies that forced him to distinguish between the phenomenal and the real world, this distinction itself depended upon a prior one between sensuous and intellectual cognition, and such a one as nobody had ever made before.

Kant's epoch-making discovery, in 1769, of the specific difference between sense and understanding, of the ideality of space and time, and of the distinction between things-in-themselves and appearances was announced in the following year through the dissertation *De mundi sensibilis atque intelligibilis forma et principiis*. Historians of philosophy have generally contented themselves with a mention of those parts of the *Dissertation* which were afterwards embodied in the *Critique*, and more particularly the section on space and time. And they are right in treating the earlier work as the germ of which the later was the mature development. This is borne out both by a comparison of contents and by the statements of Kant himself.[2] But valuable as the *Dissertation* is, considered merely as the first form of a great historical system—a position in which it takes rank with the earliest manuscript of *Faust* by the discovery of which Erich Schmidt

[1] VIII, 650.

[2] See the second paragraph of the letter to Lambert on forwarding a copy of the *Dissertation* and the first paragraph of the letter to Herz announcing the issue of the *Critique* (VIII, 662, 710).

has lately convulsed the literary world—it is still more valuable when regarded as the outcome and fusion of contradictory movements of thought by whose currents Kant had hitherto been carried, though always with a strong set towards rationalism. The distinction and complete separation between the sensuous and intellectual elements of knowledge enable Kant to satisfy in part the demands of empiricism and, still more, to recover completely the possibility of *a priori* knowledge of the supersensible. The *Dissertation* is, therefore, the most dogmatical of all Kant's writings. Following immediately upon those years of wailing scepticism we have already surveyed, the new attitude and tone are surprising enough. But sudden and great as the contrast is, it is the logical result of the discovery of the respective functions of sense and understanding, coupled with the natural, and for this stage almost inevitable, assumption that as by means of the innate activity or form of sense (space) we construct the *a priori* science of mathematics, so through the innate activity or laws of thought (cause, substance, etc.) we construct, with equal validity, an *a priori* science of metaphysics. Over and above the empirical knowledge derived through the senses, there is genuine knowledge from another source: such is the recoil from empiricism. But this knowledge is not due to the identity or agreement of thought and reality, but derives from the innate laws of the mind's activity: such is the modification of rationalism. Again, the mind having both a sensuous and an intellectual function, each must have its own original forms, and from these may be worked out *a priori* the twin sciences, mathematics and metaphysics: such is Kant's addition to his present system of constructive philosophy, though the last half of it, that concerning metaphysics, was undermined by the *Critique of Pure Reason*. Both the *Dissertation* and the *Critique* agree in distinguishing between the sensuous and the intellectual elements of our knowledge; but in the later work the intellectual function is made subject to the conditions of sense, while in the earlier it remains independent of them. There, accordingly, the understanding is limited to a knowledge of things as they appear (through sense); here it is allowed to know things as they are in themselves. There space and time

are forms of every object of knowledge, transforming all alike into appearances; here, beyond the sensible world which they encompass, is the intelligible world of reality, the ground and immaterial counterpart of the other. Take away the forms of perception, space and time, which come between the percipient and things, and the unveiled reality of the latter is, according to the *Dissertation*, apprehensible by the understanding alone. These two points, that thought is not dependent upon the forms of perception, and that thought directly knows things as they are, form together the rationalistic thesis of the work. They are not, however, proved. What is demonstrated is that perception *is* dependent upon the forms of space and time and does *not*, therefore, reveal things as they are. The case is the same with the corresponding sciences. Because the object of perception is an appearance, is made (in part) by the percipient who puts into it the all-embracing form of space, which is *a priori*, therefore the pure formal sensuous science of mathematics is possible. But the pure formal intellectual science of metaphysics is invested with equal dignity, though the object of thought is *not* an appearance, but a reality, and the *a priori* laws of thought do *not* constitute, but simply report it.

This general account of the leading ideas of the *Dissertation* might serve to illustrate Kant's philosophical development. But the stage in his mental history we have now reached is such an important one that it seems advisable to look more closely into details. Perhaps the most striking circumstance in the *Dissertation*, especially to a reader who remembers the synthesis made of sense and understanding in the *Critique*, is Kant's insistence upon keeping them asunder and his manifest fear of their overlapping. He reduces the entire method of a metaphysic of these faculties to a single prescript for preventing the innate principles of sensuous knowledge from passing beyond their own bounds and assailing the intellectual realm.[1] The *Dissertation* in the letter to Lambert, is charged with "determining the principles of sense, their validity and limits, to the end that they may not, as hitherto, confound our judgments on objects of pure reason."[2] It had better be

[1] §24 (II, 418). See the whole of that division, pp. 417–425.
[2] VIII, 663.

named a 'propædeutic to metaphysics,' or a 'general phenomenology;' it is the science *quæ discrimen docet sensitivæ cognitionis ab intellectuali; cujus in hac nostra dissertatione specimen exhibemus.*[1] The distinction (*discrimen*) is officially made in the second section, from which in great part it has passed into the *Critique*, and may, for the present at least, be passed over. But, in addition to such familiar contrasts as form and matter, phenomena and noumena,[2] we find a new contrast between the 'logical' and the 'real' use of the understanding. But the 'real use' of the understanding designates the function of producing pure notions, which are identical with the later categories. Here, however, there is only the germ of them. They are not innate, in the narrow sense of that term; they are acquired by reflection upon mental operations, and simply express the laws originally imposed upon the action of the mind.

That space and time are the principles of the form of the sensible world is proved by the same arguments as in the later *Critique*. To the matter of sensations, which originate with something sensible, space and time are ordering principles. Even when thus invested, they do not produce sensuous knowledge without the coöperation of the logical use of the understanding. This should have been, according to the *Critique*, the 'real use' of the understanding; but, as that has been made over to the faculty that knows things as they are, it cannot, in virtue of the separation here insisted upon, be associated with the faculty that knows things as they appear.

The principle of the form of the intelligible world suggests a retrospect rather than a prospect of Kant's development. It is interesting to find the great themes of his earlier reflections—God, space,[3] causality—all reappearing in the *Dissertation*. Causality is treated as a pure notion, and space as a pure perception. Both, strange as it may seem, are found to imply that *ens realissimum*, whose existence Kant had but recently declared indemonstrable. For, how can a plurality of substances stand in reciprocal rela-

[1] §8 (II, 402–3.)

[2] 'Receptivity' is there, but not 'spontaneity.'

[3] Kant's pre-critical treatment of space will be considered in connection with the critical doctrine.

tion—as they do in space and in causation—unless they all depend upon a single ground or cause that keeps them from falling into the manifold contingencies isolated existences are prone to? God is the principle that relates things into the unity of a world. The reciprocal causal connection of things, whereby that unity is, as a matter of fact, given to us, is not itself intelligible from the mere existence of things, as is generally supposed. Neither is the unity of the world through space and time a self-sufficient and independent unity. Space and time are pictures or shadows in the sensible world of the real bond of union in the intelligible world. If that is partly dependent upon the human percipient for its constitution, this, as a system of existent notions, is grounded and established in God. Because of this common ground for their essence, sensible things have relations to one another and fall into the harmony of a world.[1]

These metaphysical aspects of the *Dissertation* must not be allowed to conceal its essential character as a theory of knowledge. If it deals with a problem of rational cosmology, its point of view and mode of treatment are entirely epistemological. In its results, less divergent from the rationalistic philosophy than its predecessors between 1760 and 1770, it is in spirit one with the critical philosophy, of which it is indeed the germ and inviolable promise. How its plastic thought grew into the later system will be shown in the sequel. Meantime its revolutionary character, when compared with Kant's previous development, must be emphasized. The author of the *Dreams of a Spiritualist*, who found himself forced into an empiricism as thorough as Hume's, here announces that knowledge may be given by reason as well as by sense, and by both in independence of experience. This pro-rationalistic position is based on an anti-rationalistic distinction between sense and understanding, coupled with the discovery that both contain primitive or *a priori* elements of cognition. There is no passage from the one to the other of these two

[1] This is an old conception which Kant here revives. In our own day it has found still abler expression in Lotze's *Metaphysic*. Kant thought it sufficiently sound to give it a place in the *Dissertation*, and his disparagement of it in the letter to Lambert (VIII, 663) should not blind us to its value as an evidence of Kant's development since writing the *Dreams of a Spiritualist*.

different and, as it were, heterogeneous sources of knowledge. What comes from the one can never be derived from the other. Within its own sphere, each is an ultimate and supreme authority. "Space, time, and the axioms which relate to them, are, as regards empirical knowledge and all objects of the senses, perfectly real and contain the conditions of all phenomena and of empirical judgments. But if something is thought, not as an object of the senses, but by a pure and universal concept of reason as a thing or substance in general, then we should become involved in a mesh of errors if we subjected it to the forms of sense—space, time, etc."[1] In the *Critique*, eleven years later, Kant does subject reason to the conditions of sensibility, and concludes that we can never know things in themselves, but only as they appear to us through the medium of the senses. Here he jealously guards the independence of reason; and, in opposition both to his recent empirical and his future critical contention, he vindicates the capacity of reason to cognize things as they are in themselves and out of all relation to the percipient subject. What a complete metamorphosis of Kant's thought was effected by this new view of the scope of reason and its antagonism to sense, may be strikingly illustrated by the change in his attitude towards the problems of morality. In the writings of the empirical period he had followed the English moralists, especially Shaftesbury, in deriving the moral and religious sentiments from a gradual ennoblement of the sensuous impulses. And as late as the winter of 1765–1766 he announced to his students that the "essays of Shaftesbury, Hutcheson and Hume, though far from perfect, had gone farther than any other in the ascertainment of the first principles of all morality."[2] But so great is the breach in the continuity of Kant's empirical thought in the next three years, so complete is now his opposition of the sensuous and rational, that in the *Dissertation* he speaks with manifest contempt of "Shaftesbury *et asseclæ*," who incur "the blame rightly put upon Epicurus" for basing morality upon pleasure, when it can rest on nothing short of pure reason (*nisi per intellectum purum*).[3] His present view

[1] VIII, 663.

[2] II, 319 (*Nachricht von Vorlesungen*).

[3] §9 (II, 403).

of the function of reason necessitated an entire recasting of his earlier philosophy of morals. And Kant not only felt the need of thus readjusting his thought, but resolved to set about it without delay. In sending the *Dissertation* to Lambert, he wrote (Sept. 2, 1770): "I have resolved to devote the winter to investigations into pure moral philosophy, from which all empirical principles are excluded, and so arrange and work out what may be called a metaphysic of morals."[1]

The separation of sensuous and intellectual knowledge is the characteristic note of the *Dissertation*. It was intended as an introductory discipline, "to preserve metaphysics proper from all admixture of sense."[2] And it is not surprising that theology, to whose objects Kant was so ardently devoted, should immediately have drawn advantage from his rationalistic discovery. The notions of God and spirit, which his recent empiricism had excluded as illusory, resume for him their old place as valid reports of objective fact. Reason emancipated from sense reconquers for him the suprasensible world. This is manifest enough from the *Dissertation* itself. But it is more strongly accentuated in a contemporaneous work of Kant's faithful disciple, Marcus Herz, who undoubtedly echoes the master's views. After showing that sense has only a mediate, while reason has an immediate knowledge of its objects, Herz goes on to conclude: "Since it can be demonstrated on solid grounds that neither God nor the soul is an object of sensuous knowledge, but both belong to the bar of pure reason, we cannot apply to them the subjective conditions of sensibility [space and time] and hence there is, thanks to philosophy, neither a round soul nor an aging God."[3] Kant's *Dissertation* redeems theology from the perplexities into which it had fallen in the hands of Clarke and Leibniz, of Locke and Newton. Reason gives us a God, who is neither in space nor time.

Still it must at once be added that Kant did not develop or even emphasize this aspect of his new discovery. It followed, or

[1] VIII, 662. [2] VIII, 664.

[3] Herz, *Betrachtung aus der speculativen Weltweisheit*, pp. 27, 100. (See the work quoted in Paulsen, 123–125, and Erdmann's *Reflexionen*, II, xlv–xlvii.)

seemed to follow, from his fundamental distinction between sense and intellect, that as the one was the source of *a priori* mathematical knowledge, the other was the source of equally valid metaphysical knowledge. The theory of sensuous knowledge is as fully worked out in the *Dissertation* as in the *Critique*. Not so the theory of intellectual knowledge. And it was this that delayed Kant's great work till 1781. "In the year 1770," wrote Kant to Bernoulli, "I was able by certain definite marks to distinguish the sensuous part of our knowledge from the intellectual. . . . . But then the origin of the intellectual part made for me a new and unexpected difficulty."[1] The problem was afterwards solved in the deduction of the categories, which Kant himself regarded at once as the most difficult and most essential part of the *Critique*. And this fact should remind us, in spite of the short cuts of pragmatic historians of philosophy, how far Kant's thought had to move subsequently to the *Dissertation*, before reaching stable equilibrium in the *Critique*. The initial impulse to movement has been clearly described by Kant himself in his letter to Marcus Herz of the 21st of February, 1772, the most instructive of all those letters to his friend which give us our only glimpses of the growth of Kant's greatest work. He tells Herz he had planned a treatise on "The Limits of Sense and Reason," in two parts, one theoretical the other practical. "But," he proceeds, "as I was thinking out the theoretical part both in its entire extent and in the reciprocal relations of all the parts, I observed something essential was wanting, something which in all my long metaphysical investigation I, in common with everybody else, had neglected, something which actually contained the key to the entire secret of metaphysics, though up to this time concealed from metaphysics itself. I asked myself this question: On what ground rests the relation of that which we call a presentation (*Vorstellung*) to the object? If the presentation contains only the manner in which the subject is affected by the object, it is easy to see how it corresponds (*gemäss sei*) to the object as effect to its cause, and how this state of consciousness can present something (*etwas vorstellen*), that is, have an object. It is intel-

[1] VIII, 650.

ligible, therefore, that feelings or sensuous presentations (*sinnliche Vorstellungen*) have a relation to objects, and that the principles which are taken from the nature of our mind have a validity for all things in so far as they are objects of the senses. . . . . Intellectual presentations or notions (*Intellectual-Vorstellungen*) I was contented, in the *Dissertation*, to characterize negatively merely. I said they were not mental modifications or states of consciousness superinduced by the object. But I passed over in silence the question, how it was possible without being affected by an object, to have a presentation or notion which referred to that object. I had said sensuous presentations represent things as they appear, intellectual presentations things as they are. But how then are these things given to us if not by the mode in which they affect us? And if such intellectual presentations or notions rest on the activity of the mind, whence comes their agreement with objects, which certainly are not produced by them? And the principles which reason gives us about objects, independent of all experience—how is it that we find them actually valid? . . . . . The point of obscurity in regard to reason or understanding is that we cannot explain its agreement with things."[1]

This account of the one great outstanding problem yet to be solved, is so clearly given in Kant's own words that comment seems superfluous. Yet, as the letter was formerly ignored, so it has even recently been misunderstood. And in Professor Caird's *Philosophy of Kant* the misunderstanding vitiates his conception of the entire *Critique*.[2] He supposes Kant here to ask how knowledge in general is possible, from the ordinary dualistic point of view of subject and object. And he understands Kant to reply that no knowledge is possible from this standpoint, or possible at all, unless the consciousness of self contains or manifests itself in universal conceptions, which enable us to determine our sensations in relation to a world of objects.[3] But Kant is so far from transcending the "ordinary dualism of subject and object" by

[1] VIII, 688–690.

[2] Caird's *Philosophy of Kant*, pp. 182–192. Similarly Windelband, *Geschichte der neueren Philosophie*, II, 41–2, and Volkelt, *Kants Erkenntnisstheorie*, 30–35.

[3] Caird, *op. cit.*, p. 188.

this absolute idealism, that the question of realism and idealism, never at any time more than a subordinate one for him, has not up to this time occupied him at all; and when his so-called idealism did emerge in the *Critique*, it came as a consequence of his final solution of the strife between rationalism and empiricism which, as the main subject of his life-long thought, he is bringing to final quarters in this letter to Herz. Does he not say explicitly his problem is: How intellectual conceptions or notions, independent of the impressions of experience, can give us real objective knowledge? It is true he first puts the question in general terms: "On what ground rests the relation of that which we call a presentation (*Vorstellung*) to the object?" But he immediately divides the question into two parts: the reference to objects, first, of sensuous presentations, and secondly, of intellectual presentations or notions. The first part presents no difficulty to him. For sensuous presentations are mere appearances to sense, which, as effects, correspond to the things that produce them. Kant accepts this tenet of popular philosophy as a matter of course. But intellectual presentations are not thus passively received. Reason is active. Were its activity creative, as it presumably is in the divine mind, so that the thinking of objects would be at the same time the production of them, we could understand how notions might refer to objects. But ours is not such an *intellectus archetypus*. Neither is it a passive recipient. How then can rational knowledge of objects be explained? The problem is not, as has been strangely supposed: How is knowledge in general possible? For Kant, as we have seen, finds no difficulty in explaining that portion of knowledge, by far the larger portion, which we have through the medium of the senses. His perplexity begins and ends with the special inquiry: "How reason entirely *a priori* can form to itself notions of things with which these things necessarily agree, how by itself alone it can outline real principles of their possibility with which experience faithfully accords, ... Whence this agreement between reason and things?"[1]

The answer to this question is contained in the second part of

[1] VIII, 690.

the *Critique*, the Transcendental Analytic, and more particularly in the section headed "The Deduction of the Categories." It is the quintessence of the new work, and marks, as nothing else can, the progress of Kant's thought since the composition of the *Dissertation*. Could we retrace the steps of that advance, our sketch of the genesis of the critical philosophy would be complete.

Before making the sketch in greater detail, it may at once be premised that the whole movement issues, negatively, in the final surrender of Kant's deeply rooted doctrine that reason has power to know things in themselves, and, positively, in the new insight that whatever *a priori* knowledge reason is the source of, is restricted to the conditions of sensuous experience, or, what comes to the same thing, refers to appearances alone. Sense and reason, sundered in the *Dissertation*, are married in the *Critique;* and rational knowledge is saved by subjecting reason to the limitations of sense, or narrowing the entire realm of the knowable to the boundaries of a phenomenalism as remorseless as Hume's.

And Hume is the mediator between these two phases of the philosophic thought of Kant. This is the meaning of the well-known, though much misunderstood, passage in the introduction to the *Prolegomena:*[1] "I honestly confess, the suggestion of David Hume was the very thing which many years ago first interrupted my dogmatic slumber, and gave my investigations in the field of speculative philosophy quite a new direction." It was a 'dogmatic slumber' which allowed him to grant to reason the power of knowing things by themselves, as he had done in the *Dissertation*. This had been a natural assumption with him before the empirical period from 1762 to 1766; and in that period itself it floated before him as an ideal, which, however, his growing experientialism forbade him hoping to realize. But with the revolutionary discoveries of 1769, the old conviction is reinstated that, just as sense acquaints us with the *mundus sensibilis*, reason reveals to us the *mundus intelligibilis*. And, but for the new difficulty concerning such rational knowledge raised in the letter to Herz, Kant might have rested content with this conclusion. But, if rational knowledge was to be retained at all, he saw in the next

[1] IV, 8 (8).

following years it could only be by a new and better solution of Hume's problem of causality, which, with the aid of Hume's limitation of all knowledge to sensible experience, he effected by the deduction of the categories. This is the "new direction" given to his philosophic investigations by the quickening suggestion of Hume. And the 'dogmatic slumber' from which he has been awakened must be distinguished from the 'dogmatic slumber,'[1] out of which he was startled by the antinomies in 1769. At that date he awoke to the discovery that the senses give us a knowledge of appearances only. The later awakening he received from Hume had for result a similar discovery with regard to reason, which up to this time had been suffered to inform us of things in themselves.

In tracing Kant's pre-critical development it was shown that his quasi-empiricism during the years 1762–66 was not, as has been generally supposed, due to the influence of Hume, but was the logical outcome of his own independent reflection. There was no place for the stimulus of Hume prior to 1769, nor did Kant's own language require us to seek an earlier date. Accordingly, Paulsen, to whom belongs the honor of first establishing the independence of Kant's empirical development, carried the date of Hume's influence forward to that year. He regards Hume's scepticism as moving Kant to opposition. And he sees in the *Dissertation* "a refutation of the Humian theory."[2] The peculiarity of this view is that it holds Kant was driven into an entirely opposite line of thought by the "suggestion of David Hume." And this in fact is enough to cast suspicion on it. For no one, who has not a theory of Kant's development to save, can read merely the introduction to the *Prolegomena* without seeing that if Kant "was far from following Hume in all his conclusions" he yet regarded himself, not as the opponent, but as the legitimate successor of Hume, and he specifically declares that the *Critique of Pure Reason* is "the carrying out of Hume's problem in its widest extent."[3] The "spark struck by Hume" did not kindle

[1] IV, 86 (131).
[2] *Entwicklungsgeschichte*, pp. 144, 146.
[3] IV, 9 (10).

(in the *Dissertation*) a fire to consume its own source. It was a light, and the only light, that guided Kant's path in exploring the possessions of pure reason. And that problem first dawned upon him after the *Dissertation* had been published, as we know from the letter to Herz. The *Dissertation*, it is true, announced memorable discoveries. It proved that space and time were not notions but perceptions, or rather forms of perceiving, that these forms of sensibility, like the pure notions of the understanding, are absolutely independent of experience; that as *a priori* forms, purely subjective and ideal, they on the one hand turn the objects of sense-perception into mere appearances, and on the other thus make mathematics possible. All this passed unchanged into the *Critique* where it constitutes the Transcendental Æsthetic. But it was different with the remaining thesis of the *Dissertation*, that reason gives a knowledge of things in themselves. How is this possible? Kant asks sceptically in the letter to Herz. 'It is impossible' is the refrain of the *Critique*. The presupposition and result of the deduction of the categories is that notions of the understanding tell us nothing of things as they are, but refer solely to empirical objects or appearances of sense. But the deduction is the centre of gravity of the whole work. And as the *Critique* is the "carrying out of Hume's problem in its widest extent," we must look for Hume's influence at this vital point. And do we not find it in Kant's concession to empiricism, that, though notions are absolutely *a priori*, they have reference only to objects of experience, and have no validity for things in themselves? This concession, and the problem which it solves, as they form the substance of the *Critique*, are wholly wanting in the *Dissertation*, whose teaching, so far as it can be referred to on this point, is of quite an opposite complexion. But the *Critique* is the "carrying out of Hume's problem." Therefore, Hume's influence must be later than the *Dissertation*, which lacks the characteristic philosophy of the *Critique*. And, indeed, Kant tells us in precise words, that the principle which he adopted from Hume was: "Not to carry the use of reason dogmatically beyond the field of all possible experience."[1]

[1] IV, 107–8 (166).

But it is not to be supposed that Kant sacrificed at once or without a hard struggle to this principle of Hume's, the life-long belief he had shared with the dogmatists in the knowableness of things in themselves, and the hopes he had based upon it for a rational theory of the soul. The surrender was gradual, and forced upon Kant by long reflection. In 1772 he had, independently, become aware of a problem for which as yet he has no solution. But towards the end of 1774 he wrote: "I find myself in possession of a principle which solves what has hitherto been a mystery, and at the same time brings under certain and easily applied rules the procedure of that reason which is wont to hold itself aloof from rules."[1] But, in the lectures on anthropology and metaphysics, which cannot be earlier than the winter of 1773–4, the limitation of reason is not made at all, or only in the most general and uncertain way.[2] Accordingly, the beginning of the year 1774 may be taken as the most probable date for the commencement of Hume's influence on Kant. Kant's resistance to it was stronger than the language just quoted implies. For, in another letter to Herz, dated 24th November, 1776, we have a record of protracted struggling,[3] which threatened to delay indefinitely that *Critique of Pure Reason* already promised for Easter, 1775.[4] By August, 1777, however, there was nothing more to do to the work except to improve the style, which could be done in the following winter.[5] But for one reason or another it did not appear until 1781. Writing on the first of May of that year to Marcus Herz, in forwarding a copy of the work, Kant observed: "This book contains the outcome of all the various investigations that began with the notions to which we devoted a formal disputation under the designation of *Mundus sensibilis et intelligibilis*."[6]

Thus by Kant himself the genesis of the *Critique* is referred to the *Dissertation*. And in other passages, more particularly in the introduction to the *Prolegomena*, he has described the details of

[1] VIII, 695. The letter is problematically dated 1773 by Hartenstein. I have dated it 1774 on the authority of Benno Erdmann (*Reflexionen Kants zur krit. Philos.*, II, Einl. lviii–lix).

[2] Erdmann, *op. cit.* (note 115). [4] VIII, 695. For date, see note 115.

[3] VIII, 698. [5] VIII, 702. [6] VIII, 710.

the process by which, under the influence of Hume, he was carried from the one to the other. No doubt the description, as in Goethe's *Wahrheit und Dichtung*, makes the development more systematic and regularly progressive than it is likely to have appeared in a contemporaneous photograph, but that it contains the essential truth about Kant's philosophical development no one has ever ventured to doubt. Under the conviction that reason gave us a knowledge of things in themselves, he was going about with the problem: How can *a priori* notions have a reference to objects? Among these notions none had seemed so important to Kant as causality. What more natural in this receptive and suggestive state of mind than that he should bethink himself of the kindred problem of Hume, of which he had long ago read? That problem was, as Kant expresses it, "With what right reason thinks anything so constituted that, if granted, something else must necessarily be granted thereby; for this is the meaning of the concept of cause."[1] And Hume's solution was also at hand. "He demonstrated irresistibly that it was perfectly impossible for reason to think such a combination by means of concepts and *a priori*—a combination that contains necessity. We cannot at all see why, in consequence of the existence of one thing, another must necessarily exist, or how the concept of such a combination can arise *a priori*. Hence he inferred, that reason was altogether deluded by this concept, which it considered erroneously as one of its children, whereas in reality, the concept was nothing but the bastard offspring of the imagination, impregnated by experience, and so bringing certain representations under the law of association. The subjective necessity, that is the custom which so arises, is then substituted for an objective necessity from real knowledge. Hence he inferred that reason had no power to think such combinations, even generally."[2]

Kant shows unbounded admiration for Hume's acute and original thought. He disparages, somewhat unjustly, it must be added, Hume's opponents, "Reid, Oswald, Beattie, and even Priestley." And though for his own part he cannot follow Hume in all his conclusions, he holds that philosophy has to advance

[1] IV, 5 (4–5). [2] IV, 5–6 (5).

from Hume's "well-founded, but undeveloped thought."[1] Accordingly, Kant's problem is the problem of Hume, with this difference only, that, whereas Hume restricted his investigations to the notion of causality, Kant, grasping the difficulty in its entirety, considered all those pure notions of the understanding whereby it thinks the connection of things *a priori*.[2] Nor is the agreement between them confined to their formulation of the problem. Kant clung to his pre-critical discovery that the union of things implied in causality cannot be understood *a priori* from notions. "Hume was right," he says in a later passage of the *Prolegomena*,[3] "in his contention that we can by no means see by reason the possibility of causality, that is, of the reference of the existence of one thing to the existence of another which is necessitated by the former." And Kant adds that the same incomprehensibility attaches to our notions of substance and reciprocity. Yet Kant cannot follow Hume in making the causal connection a mere subjective association which takes on through custom the semblance of objective necessity. And he pronounces "hasty and mistaken" Hume's inference, from this special conclusion, to the general incapacity of reason to think such combinations *a priori*.[4] Again, after deducing the categories, Kant reiterates: "I am very far from holding these concepts to be derived merely from experience, and the necessity represented in them to be imaginary and a mere illusion produced in us by long habit. On the contrary, I have amply shown that they and the principles derived from them are firmly established *a priori*, or before all experience, and have their undoubted objective value, though only with regard to experience."[5]

Kant accepted Hume's problem and his negative argumentation, while rejecting his empirical and subjective solution. To reach a better solution, he first endeavored to generalize Hume's problem. He "soon found that the concept of the connection of cause and effect was by no means the only one, by which the understanding thinks the connection of things *a priori*, but rather

[1] IV, 8 (9).
[2] VI, 8, 9 (9, 10).
[3] IV, 59 (88).
[4] IV, 5–6 (5–6).
[5] IV, 59 (88).

that metaphysics consists altogether of such connections."[1] His speedy success in extending Hume's problem was due to the fact that before receiving any stimulus from Hume he had already busied himself, as we know from the memorable letter to Herz, with an enumeration and classification of the *a priori* notions or categories of the understanding.[2] At that time he would ascertain their number by a division of metaphysics into all its essential branches, so that the categories should "fall into classes in accordance with (*durch*) a few principles of the understanding." But at the later period to which the autobiography of the *Prolegomena* refers, he succeeded in determining their number by "starting from a single principle."[3] This principle was the activity of the understanding in judging, and a complete table of its functions was easily got from any text-book of Aristotelian logic. That there were twelve categories which Kant "was now certain were not derived from experience, as Hume had apprehended, but sprang from pure understanding,"[4] is the second discovery along the road to the critical philosophy. And it involved Kant forthwith in a third problem—the deduction of the categories. That is to say, he had to demonstrate how these notions, which were subjective and *a priori*, were referred, and validly referred, to objective things. "This deduction," says Kant, "which seemed impossible to my acute predecessor, which had never even occurred to any one else . . . . . was the most difficult task ever undertaken in aid of metaphysic."[5] And our preceding sketch justifies Kant's assertion: "It has cost a labor of many years to solve this problem in its whole universality."[6] The essence of the problem is to determine the true significance of the pure notions of the understanding and the condition of their use."[7] It is solved by showing that the categories or notions are functions of judging, telling us nothing about things in themselves, and devoid of

[1] IV, 8 (9).

[2] VIII, 690. It is odd that this passage has escaped in this connection, the indefatigable research of Benno Erdmann, especially as it verifies a conjecture he makes in his introduction to Kant's *Prolegomena*, lxxxviii.

[3] IV, 8 (9).

[4] IV, 8 (9).

[5] IV, 8 (9).

[6] IV, 25 (37).

[7] IV, 72 (109).

all use save as applied to objects of sensible experience. "This complete (though to its originator unexpected) solution of Hume's problem preserves, therefore, to the few concepts of the understanding their *a priori* origin, ... not deriving them from experience, but it from them, a completely reversed mode of connection which never occurred to Hume. . . . . All synthetic principles *a priori* are nothing more than principles of possible experience and can never be referred to things in themselves, but to phenomena as objects of experience."[1]

Thus the deduction of the categories is the complete and final answer to the question raised, in 1772, in the letter to Herz, which, as has just been shown, is Hume's question generalized. In this sense Hume may be called the 'originator' of the critical problem, which for his own part Kant independently discovered. But Hume's principle that reason cannot go beyond experience enabled Kant to solve the problem without giving up the theory of the *a priori* origin of the concepts; so that the essential advance of the *Critique* upon the *Dissertation*, namely, the limitation of reason (which Kant often describes as the main result of his entire system) is due to the direct influence of Hume. On that point the critical philosophy is a continuation of empiricism. On the question of the origin of knowledge it remains true to rationalism. The attempt to make a more radical opposition, or a more complete identification of criticism and empiricism, is not sustained by the facts, nor is it compatible with the mediatory tendencies of Kant. On the other hand, the view here taken may be corroborated from Kant's own *Reflections:* "My intention," he there writes, "is to investigate how much reason can know *a priori*, and how far its independence of instruction from the sense extends."[2] Accordingly, "the critique of pure reason is the critique of the conditions under which alone pure reason can form judgments."[3] But its result was very different from what had been expected at the beginning of the inquiry. "What was regarded at first as a doctrine of pure reason is now a disci-

[1] IV, 61 (91–2).
[2] *Reflexionen Kants zur kritischen Philosophie*, II, 32, no. 98.
[3] II, 35, no. 112.

pline, that is, a castigation and rebuke of pure reason (*ihre Zucht und Animadversion*). This discipline is a limitation of the powers and tendencies of the soul to their proper limits." [1]

There is, however, also a positive side to the critical solution: it vindicates *a priori* knowledge of the phenomena of sense. But "metaphysics when it goes beyond the pure principles understanding contributes to experience, has absolutely no other than a negative use both as regards nature, corporeal and spiritual, and what transcends nature." [2] Yet it is not to be supposed that this negative result is of little consequence in Kant's estimation. "When error is at once seductive and dangerous, negative knowledge and criteria of it are more important than positive." [3] These can be discovered only by deep searching. "The philosophy of ignorance is very useful, but also difficult, because it must go down to the sources of knowledge." [4]

Thus we have traced the genesis and growth in Kant's mind of this profound philosophy, which is at once agnostic and rationalistic. There still remains the more difficult task, the examination of the validity of that philosophy and its significance for the thought of to-day. This is a question of logical worth. But its solution is greatly facilitated by the insight we have gained into the psychological origin of the system.

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[1] II, 46, no. 155.
[2] II, 49, no. 165.
[3] II, 44, no. 148.
[4] II, 45, no. 151.

THE METAPHYSIC OF ARISTOTLE.

III. The First Principles of Finite Reality.

IN his discussion of the first principles of knowledge, Aristotle has shown that there can be no science of the real unless intelligence, in grasping the essential characteristics by which things are determined, always remains in unity with itself. Hence it is impossible that things should be conceived either (*a*) as determined by opposite characteristics or (*b*) as not determined at at all. Whatever is conceived as real must be conceived as having a fixed and determinate nature, and upon this fundamental presupposition rests the possibility of there being any science whatever. Deny this presupposition and every one of the sciences is destroyed. Metaphysic, therefore, in showing that it cannot be denied, provides the theoretical basis for all the sciences; it does for them what they cannot do for themselves. But this is not its sole function. Having established the first principles of knowledge, it has next to determine and justify the first principles of reality. Just as it has shown that there can be no science unless intelligence is in unity with itself, so it must show that there can be no reality unless under presupposition of certain universal and necessary principles.

What, then, are the first principles of reality? It will help us to answer this question if we pass in review the various senses in which we ordinarily speak of reality. Now, in the first place something may be said to be 'real,' which simply is or occurs, something which is 'incidental,' 'accidental,' or 'contingent' (*κατὰ συμβεβηκός*). Secondly, we call that which is 'true' real, because we believe it to express the actual nature of a thing. Thirdly, we regard the real as that which can be characterized in certain universal ways; *e.g.* we express 'what' it is (*τὸ τι*), 'how' it is (*ποίον*), 'how great' it is (*πόσον*), 'where' it is (*ποῦ*), 'when' it is (*πότε*), etc. Lastly, we speak of something existing 'potentially' (*δύναμει*) or 'actually' (*ἐνεργείᾳ*). We have, therefore, to ask whether it is right to characterize reality in all

these senses, and what is their relation to one another. Let us, then, taking them in order, begin with 'accidental' or 'contingent' reality.[1]

1. *Necessity and Contingency.*

The conception of 'contingency' plays so important a part in the philosophy of Aristotle, and has such far-reaching issues, that it must be examined with the greatest care. The 'contingent' or 'accidental' (*τὸ συμβεβηκός*) is contrasted by Aristotle himself with the 'necessary' (*τὸ ἐξ ἀνάγκης*) and the 'regular' (*τὸ ἐπὶ τὸ πολύ*), being negatively defined as that which is neither 'necessary' nor 'regular.'[2] What, then, is the 'necessary?' We are already familiar with one sense of the term: That is 'necessary' which is capable of being proved, because whatever admits of proof 'cannot be otherwise' than it is proved to be.[3] But, as we are at present enquiring into the first principles of reality, not of knowledge, the 'necessary' in this sense may be set aside. There remain three other senses of the term, which are expressly distinguished by Aristotle in various passages of his writings. These are (1) that which is effected by force or external compulsion (*βίᾳ*), in opposition to the natural tendency or stress (*ὁρμή*) of a thing; (2) that without which a thing cannot be 'good'; (3) that which 'cannot be otherwise,' but must be as it is.[4] The three kinds of 'necessity' here distinguished apply respectively to (*a*) inorganic things, (*b*) living beings as such, including man, (*c*) the eternal and unchangeable. They may be distinguished as (1) external, (2) conditional, and (3) absolute necessity. A few words in regard to each will help to bring out Aristotle's reasons for distinguishing them.

(1) Aristotle conceives of inorganic things as having a certain 'nature,' which is 'necessary' in the sense that, while it may be suspended by some external force, it always acts in the same unvarying way when it acts at all.[5] Thus, it is the 'nature' of a stone to fall to the earth, and it is said to fall by 'necessity'; when, on the other hand, it ascends, it does so under the influence

[1] *Met.* E, 2, 1026^{a} 33–^{b}3.
[2] *Met.* E, 2, 1026^{b} 27–33.
[3] *Met.* Δ, 5, 1015^{b} 6–9.
[4] *Met.* Λ 7, 1072^{b} 11. Cf. Δ. 5.
[5] *Met.* Θ 2, 1046^{b} 5.

of an external force.[1] The same remark applies to all inorganic things: it is the nature of the 'hot' to display only 'heat,' of a luminous object to be only luminous, unless there is an external force which prevents them from manifesting their 'nature.' Here, therefore, we have either a necessity of 'nature' or an 'external' necessity. Inorganic things, as we may say, can be acted upon only mechanically. External or mechanical 'necessity' is, therefore, peculiar to inorganic things, and arises from the fact that they are not capable of changing in opposite ways, but only in one way.[2] (2) Living beings are of a more complex 'nature,' and therefore in their character as living they are not subject to external or mechanical necessity. Unlike inorganic things their changes may be in one of two opposite directions; they may either be in process of realizing their 'nature' or of failing to realize it. Thus, the 'nature' of a living being is to display those activities in which its existence (*οὐσία*) may be said to consist; and indeed, as Aristotle himself tells us, the most proper, though not the only sense of 'nature,' is that realization of itself, which is characteristic of an organized being.[3] Why, then, does it not always realize its end? Because that end can be realized only under condition (*ἐξ ὑποθέσεως*) that it succeeds in making the environment a means to its own perpetuation and perfection. Thus, the plant or animal cannot live without nourishment, and where this fails it must perish. Here, therefore, we have a 'conditional' necessity.[4] This 'conditional' necessity, however, is not confined to plants and animals, but applies also to man as a rational being. Here, however, 'conditional' necessity has a wider sweep and assumes a higher form. For the life of man, so far as he is rational, is not merely directed to an end, but it consists in the intelligent comprehension of that end and of the means to its accomplishment. And as man, like other finite beings, is capable either of realizing his 'nature' or failing to realize it, we have to explain why such success or failure is possible. The

[1] *N. E.*, ii. 1, 2; *An. Post.* ii. 11, 94^{b} 36.

[2] It is not correct to say that Aristotle limits purposiveness to living or rational beings; inanimate beings also have a 'nature' or 'end,' though it is invariable.

[3] *Met.* Δ 4, 1014^{b} 16.

[4] *De Part. An.* i, 1, 642^{a} 1; cf. Stewart's *Notes*, I, 256–9.

explanation is, as before, that man, like other living beings, is subject to 'conditional' necessity. This may be illustrated by one of the most characteristic productions of man's rational life. Man is by 'nature' a political being, and only in a well-organized state can he realize himself. But the state is dependent upon conditions which lie beyond his power. It must have a territory, just as the plant and animal must have food, or it cannot exist at all; but the territory may be unfavorable to its perfection. It must have a population, which, however, may be of such a character as to work against the ideal of political organization; the citizens may be full of spirit, but wanting in intelligence and skill as in the north of Europe, or they may be intelligent and inventive, but wanting in spirit, like the natives of Asia. The state must be sufficiently wealthy if it is to afford the necessary conditions for culture, but the pursuit of wealth may draw men away from higher things. Thus, because of that 'material' or 'conditional' necessity which is inseparable from human life, the complete realization of the higher life may be impeded. And, of course, the individual man is also subject to 'conditional' necessity, for he, too, may be placed in unfavorable conditions. 'Conditional' necessity, then, is characteristic of all living beings, whether these are rational or irrational.[1] (3) The highest form of 'necessity' is that 'absolute' necessity which is displayed in mathematical relations, in the changes of the heavenly spheres and in the 'eternal and unchangeable Being' or God. Here, there is neither external compulsion nor conditional necessity. (*a*) The mathematical relations 'cannot be otherwise.' It is true that they have no existence apart from sensible things, but they are eternal and unchangeable relations, to which all sensible things must conform. That the diagonal is incommensurable with the side of a square is 'necessary' in the absolute sense.[2] (*b*) The ἀίδιοι κινήσεις of the various heavenly spheres—such as the solstices and the sunrise—display the same kind of necessity. They consist in a fixed cycle of changes, which never began and can never end. They are, therefore, not only beyond all external compulsion,

[1] *Pol.*, 1303^{b} 7: 1327^{b} 23; cf. Newman's *Pol. Arist.*, I, 17–18.
[2] *Met.* E. 1, 1026^{b} 13; *N. E.* iii, 3, 3.

but independent of all external conditions. Their 'necessity' is that of their fixed constitution, as directly related to the *πρῶτον κινοῦν*.[1] (*c*) But the only *being* that is absolutely 'necessary' is God, who is *οὐσία ἀΐδιος ἀκίνητος*. The 'necessity' here, so far from being due to external compulsion or to dependence upon 'material' conditions, consists in absolute perfection or completeness of nature. Hence, as self-sufficient, self-dependent, and free from 'matter' (*ὕλη*), the Divine Being can suffer no pain, but lives in eternal blessedness.[2] It is thus evident that the fundamental idea of the 'necessary' is for Aristotle, as he tells us himself, "that which cannot be otherwise," and that 'external' and 'conditional' necessity are marks of the finite and dependent.[3]

Now, we see at once that there can be nothing 'accidental' or 'contingent' in that which is 'absolutely necessary.' Hence, the 'accidental' has no meaning in mathematical relations which are fixed and unchangeable. No doubt we sometimes speak of the 'accidents' of mathematical figures, as when we say that it is an 'accident' of a triangle that its angles are equal to two right angles; but an 'accident' in this sense is an inseparable and essential property, which, though it is not directly involved in the conception of the thing, is deducible from it by a necessary process of proof, and when proven is seen to be 'absolutely necessary.'[4] Nor can there be anything 'accidental' in the *ἀίδιοι κινήσεις* of the heavenly spheres, which are absolutely invariable and eternal. Lastly, there is nothing 'accidental' in the 'eternal and unchangeable Being,' whose nature as absolutely perfect is the same 'yesterday, to-day, and forever.' There are therefore only two spheres within which contingency can prevail—the sphere of inorganic things and the sphere of living beings. Within these two spheres, while it is true that changes occur as a rule (*ἐπὶ τὸ πολύ*) in a definite way, there yet are cases in which the rule is broken, and here the changes are said to be 'accidental.' Thus the phenomena of the seasons are on the whole regular,

[1] *Met.* E. 2, 1026^{b} 29.

[2] *Met.* Λ 6, 1071^{b} 4; 1072^{a} 21. Cf. Stewart's *Notes*, I, 253–6.

[3] It is worthy of special consideration that 'absolute necessity' in this last application is, in Aristotle, virtually perfect freedom or self-determination.

[4] *Met.* Δ 30, 1025^{b} 30.

so that it is unusual to have storm and cold in the dog-days; but this rule is sometimes broken, and we call it an 'accident' when this takes place.[1] Again, there is a general uniformity in the spheres of organic nature and of human life; but this general uniformity has exceptions, and these we attribute to 'accident.' Thus, every living being tends to conform to a definite type, and 'as a rule' it does conform to that type; but sometimes we find a variation from it, and this is said to be 'accidental.' And, in the sphere of human life, we proceed by rules, which apply generally; but there are exceptions, which we attribute to 'accident' because they cannot be foreseen. Our first notion of the 'accidental' is, therefore, that which deviates from the general rule, and as such cannot be assigned to a definite principle. Aristotle, however, seeks to determine more precisely the various forms of the accidental. (1) The simplest form is that of the mere concurrence (*σύμπτωμα*) of two events which have no causal connection with each other; as, *e.g.*, the occurrence of an eclipse when a man is taking a walk. (2) In the case of organic beings, the 'accidental' consists in some deviation from the normal type. The formative principle is always striving to realize itself in the production of a definitely organized being, but this end may not be realized. The explanation of this anomaly must be sought in that 'conditional necessity,' which we have seen to be characteristic of living beings. For the living being cannot realize its 'nature' without conforming to the necessary laws of the material environment, and when it fails to master the environment and turn it to its own use, there is a deviation from the normal type. The explanation of the 'accidental' is therefore to be sought in the 'matter' (*ὕλη*), without which the formative principle is powerless, but which may be of such a character that it thwarts and prevents it from realizing its tendency. 'Matter' is thus at once the 'necessary condition' of the existence of organized beings, and a possible source of failure. As a rule (*ὡς ἐπὶ τὸ πολύ*) natural organisms succeed in adapting themselves to the material conditions, and so far as this is the case, *ὕλη* or *τὸ ἀναγκαῖον τὸ ἐξ ὑποθέσεως* is a coöperating cause (*συναίτιον*) in their life; but, where

[1] *Met.* E. 2, 1026[b] 33.

the ὕλη, is unfavorable something 'accidental' arises, as we say 'spontaneously' (ἀπο ταὐτόματου). The 'accidental' in this sense is said by Aristotle, with an etymological play upon the word *αὐτόματον*, to be that which is 'in vain,' *i.e.*, that which does not attain its end.[1] Intelligent beings, on the other hand, can realize their rational life only in so far as they bring things within the sphere of their knowledge and determine themselves by reference to them. But here also there may be a failure to realize the end, either because there are incalculable elements or because of defective will.[2] Thus, beyond the sphere of intelligent foresight and the conscious employment of the material conditions as means of self-realization, there are things and events which are not subject to human agency, but are the result of 'chance' or 'fortune' (τύχη). It rests with 'fortune' whether the state shall be provided with the adequate supply of accessories (σύμμετρος χορηγία).[3] So 'fortune,' good or bad, is beyond the control of the individual, because it is beyond intelligent prevision. The 'accidental' in this sense is limited to the sphere of human agency. As τὸ αὐτόματον is the στερήσις of φύσις, so τύχη is the στερήσις of διάνοια. Both arise from conditional necessity, or the dependence of the being upon the external conditions without which its end cannot be realized. The 'accidental' is, therefore, either that which deviates from the normal type of organized being, or that which lies beyond the sphere of intelligent purpose. In the latter case, however, the 'accidental' need not be unfavorable; it is only incalculable, for there is good as well as bad 'fortune.'[4]

We are now in a better position to understand Aristotle's discussion in the *Metaphysic* of the 'accidental' or 'contingent.' It cannot surprise us that he should declare the 'accidental' to lie beyond the region of science; for science can only tell us what is 'universal,' or at least what obtains 'as a rule,' whereas the 'accidental' by its very nature involves that which is exceptional and incalculable. Hence all the sciences, whether they are practical, productive, or theoretical, consist in a statement of necessary

[1] *Phys.* ii. 8, 199[b] 1.

[2] Defective will is want of mastery of the 'matter' of the passions.

[3] *Pol.* 1332[a] 29; cf. Newman's *Pol. Arist.*, I, 23.

[4] Cf. Stewart's *Notes*, I, 259-260.

or general laws. Politics, for example, is a practical science; but no legislator can anticipate the accidental occurrences which may betray some unexpected weakness in the Constitution of the State. Thus, Solon, rightly maintaining that the citizens must neither be in slavish subjection to the government nor in enmity against it, gave to the people the power of electing to offices and calling the magistrates to account. He could not foresee that this rational freedom would give rise, from the force of circumstances, to an extreme democracy. Yet this actually happened; for the people were so elated by the part they played in the Persian War, that they were led to follow worthless demagogues. Here, therefore, we have an instance of the influence of a mere concurrence (*σύμπτωμα*) of circumstances.[1] And, as we have already seen, the financial prosperity of a state is partly a gift of 'fortune,' for which the government deserves neither praise nor blame; for 'fortune' is beyond the range of intelligent foresight.[2] The range of the productive sciences is similarly limited. The architect has a knowledge of the laws of architecture, which enables him to construct a house, in accordance with a precise and definite plan; but he cannot possibly foresee all the 'accidental' relations which may arise from its existence: how it will give pleasure to one man, pain to another, and a thousand other circumstances of the same kind. As these cannot be foreseen, they fall entirely beyond the range of his science. Similarly, the theoretical sciences deal with the universal nature of things, not with their 'accidental' properties. Geometry determines the essential properties of spatial figures, but it cannot state the infinite variety and complication in the shape of sensible things. There is, therefore, good reason for saying that the 'accidental' does not fall within the province of any science. The truth is, that the 'real,' in the strict sense of the term, consists in the permanent or essential nature of things, and that the 'accidental' cannot properly be held to be 'real.' Hence Plato was not wrong in saying that the Sophist, in making reality consist in a mere assemblage of particulars, converted 'reality' (*τὸ ὄν*) into 'unreality' (*μὴ ὄν*). If, with the Sophist, we fix exclusively upon

[1] *Pol.* 2, 12, 1274[a] 12. [2] *Pol.* 4, 13, 1332[a] 29.

changing accidents, it is easy to show that there is no permanent nature in things. The 'musical,' they argue, sometimes accompanies the 'grammatical,' sometimes it does not; a thing must either be or not be, and, therefore, all is eternal or all is in perpetual change. This reasoning overlooks the real object of science, which is not the 'accidental,' but the universal or general nature of things. For the essence of things is not incompatible with a change of the 'accidental' but maintains itself in such change.[1]

But, though the 'accidental' is not an object of science, we may still attempt to explain how it arises. As we have seen, it has no place in the eternal and unchangeable, for here what exists 'cannot be otherwise.' It is, therefore, found only within the sphere of external nature or of living and intelligent beings; in other words, in those cases where there is 'as a rule' a regular succession of changes, but where this rule may be broken. Wherever anything exists or occurs which is contrary to the general rule, there we have the 'accidental.' To have cold weather in the dog-days, for a man to be 'white' or 'musical,' or a cook to cure a man of disease, are all instances of the 'accidental,' because they are all exceptions to the general nature of things. Now, the source of this deviation from rule must be sought in the 'matter' of things, which is sometimes incompatible with the realization of their universal or ideal nature. Unless we admit that there is such a limit, we must regard every series of events as absolutely necessary. In support of this view a very plausible case may be made out. Any isolated chain of events seems to be necessary and inviolable. Thus, a man is thirsty; being thirsty he goes out; when he goes out he is killed by a fall. Each event is a fact, and seems to follow necessarily from the other. But, in this reasoning, it is overlooked that each particular event, though it is no doubt due to some cause, cannot be referred to a single principle. If the connection were of the fixed and invariable character supposed, it would be possible to predict the whole sequence of events, if we only knew that the man was thirsty; and it is just because we cannot predict that

[1] *Met.* E. 2, 1026^{b}, 3–24.

sequence that we call his death 'accidental.' We know that a man will die, because we know that his organic functions must wear out, but we do not know what will be the particular cause of his death, and hence this belongs to the realm of the 'accidental.' In the instance given, therefore, there is no necessary connection of the successive events; each has its own cause, but the one is not the cause of the other. We have here, in fact, a mere concurrence (*σύμπτωμα*) of events, not a necessary connection. The 'accidental,' then, is something which is contrary to the normal tendency or essential nature of things; and it lies beyond the realm of science, because all science is based upon a comprehension either of what is 'absolutely necessary' or what obtains 'as a rule.'[1]

It must be observed that, according to Aristotle's doctrine, the 'accidental' or 'contingent' belongs to the actual world, not merely to our imperfect apprehension of it. All finite existence seems to him imperfect, just because it is dependent upon something which is not, or at least need not be, in harmony with the ideal or formative principle operative in it. 'Accident' is a necessary incident in the process by which that principle strives to realize itself under conditions which limit it. Aristotle, therefore, neither regards the 'accidental' as merely due to our imperfect knowledge nor as proceeding from an absolute limit in human intelligence. If he took the former view, he would be forced to discard the whole conception of 'conditional necessity,' as based upon the 'material' conditions under which things exist; for, as with each extension of knowledge, the 'accidental' would be so far resolved into the 'necessary,' it must be supposed that with completeness of knowledge it would vanish altogether. If he took the latter view, he must in consistency deny that there is any distinction between the 'necessary' and the 'accidental'; for where all is relative nothing can be 'necessary,' and he distinctly maintains that, if nothing is 'necessary,' there is no science whatever. What Aristotle holds, therefore, is, not that our intelligence cannot reduce all phenomena to invariable

[1] *Met.* E, 2, 1026^{b} 24–3, 1027^{b} 16. The passage just summarized is obscure, and seems to be regarded by Bonitz as unintelligible. The main difficulty is to distinguish Aristotle's own view from that which he rejects.

laws, but that phenomena themselves are not invariable. The only absolutely invariable being is the 'eternal and immutable Being,' the only absolutely invariable changes are those of the heavenly spheres, and the only absolutely invariable relations are the mathematical. The sensible world is a region in which events may or may not be, though on the whole it is uniform; the changes of organized beings exhibit a dominant tendency to the formation of definite types, but this tendency is ever and anon broken in upon by the failure of the formative principle to overcome the resistance of 'matter;' and the sphere of human agency is imperfectly rational, because the world in which it is carried on, and the conditions under which it must operate, are not perfectly fitted for the realization of what man in his idea is. Thus, while Aristotle maintains that whatever is necessary or regular can be dealt with by science, he sets aside, as beyond the realm of science, all that belongs to the individual as such. The individual has a universal nature, and with this science can deal; but the peculiarities which differentiate one individual from another belong to the 'accidental' or 'contingent,' and fall outside of science.

2. *Truth and Error.*

In his attempt to determine what constitutes reality as such, Aristotle has been led to set aside the 'accidental' or 'contingent.' There is in the world an element of 'contingency,' due to the imperfect realization of the formative principle, whether it operates unconsciously or consciously, but it lies beyond the realm of science. Science exists only in so far as intelligence is capable of grasping the universal principle immanent in things, or at least the general rule which they follow, and what is neither 'universal' nor true 'on the whole' is not a possible object of science. His next step is to show, positively, that science consists in the comprehension by intelligence of the necessary or essential nature of reality, and that the preliminary stage, in which it deals with the 'accidental' or 'contingent,' is beyond the realm of science. From this point of view the real is conceived as that which is grasped by thought as it is, the unreal as that which thought fails to grasp. The discussion of truth and error, therefore, follows

as a natural sequence upon the discussion of 'contingency.' What Aristotle now seeks to show is, that, only in so far as the intelligent subject comprehends and expresses the necessary and universal, does he attain to the stage of science. From this stage he distinguishes the preparatory process in which intelligence is capable of either truth or error. This latter stage, which, like Plato, he calls opinion (*δόξα*), occupies an intermediate position between sensible perception and science; it is, in fact, the stage of experience (*ἐμπειρία*) viewed from the side of the thinking subject. Sensible perception, as we have seen, is never false in so far as it is limited to its proper object; error arises only with the exercise of judgment. It is in this intermediate stage that 'truth' and 'error,' in the strict sense of these terms, are possible, whereas at the stage of science there must be either knowledge or ignorance. 'Truth' consists in 'right opinion,' 'error' in 'wrong opinion;' science cannot be 'right' or 'wrong,' because it consists in the comprehension of the permanent nature of reality, and its opposite is therefore ignorance.[1]

'Truth' and 'error,' in the narrower sense, obtain only where certain 'accidents' are sometimes combined and sometimes separated from a thing. Thus they presuppose that things are in themselves subject to change, and are not dependent upon the thinking subject. Truth and error, however, exist only for the thinking or judging subject. A judgment consists in bringing together in the unity of thought what is discriminated; it is not a mere sequence or concomitance of ideas, but a synthesis of ideas. Now, a judgment will be 'true' if it combines in thought what is combined in the object, and separates in thought what is separated in the object; a judgment will be 'false,' which combines in thought what is separated in the object, or separates in thought what is combined in the object. It is obvious that, while truth and error exist only for a thinking subject, they yet depend upon the actual nature of things. A judgment consists in affirming or denying a certain attribute of a thing, but the affirmation or denial is true or false, according as it expresses what actually obtains, or does not obtain, in the object. The unity of

[1] *N. E.*, VI. 9, 1142[b] 11.

a thing will, therefore, consist in a certain attribute being combined in it, and it will lose this unity if the attribute is separated from it. Now, 'accidents,' in the strict sense of the term, may either belong or not belong to a thing. Hence, the same proposition may be at one time true, at another time false. It is thus obvious that there can be no universal judgments in regard to the separable accidents of things. Such judgments may be either 'right' or 'wrong,' but they cannot be absolutely true. Aristotle, it must be observed, is not attempting to explain *why* a particular judgment is either true or false; his object is to show that there can be no absolute or universal judgment in regard to the combination or separation of 'accidents,' just because such combination or separation is not universal. We have, therefore, to exclude all such judgments from the sphere of science. The case is different where we affirm something of a thing which belongs to its essence, or deny something of a thing as contradictory to its essence. Here we have universal and necessary judgments, because the thing cannot exist in separation from the attribute affirmed, or in combination with the attribute denied. Thus, there can be no triangle, the interior angles of which are not equal to two right angles, and there can be no diameter which is commensurable with the side of the square. The affirmative judgment, "A triangle contains two right angles," and the negative judgment, "The diagonal is not commensurable with the side of the square," are both universal. The same thing holds in all cases in which a property is necessarily combined with, or separated from, a thing. We cannot say that such judgments may be at one time true, at another time false; they are always true or always false. Like all judgments, their truth or falsehood depends upon their conformity with the object; but, as in the object the connection or separation of an attribute from a thing is fixed and unchangeable, the judgment which asserts or denies that attribute of the thing is necessarily true or false. All judgments, then, which assert the combination or separation of 'accidents' in a subject may be both true and false; whereas judgments which assert the combination or separation of 'essential properties' must be either true or false, but cannot be both.

There is a third case, in which truth depends, not upon the combination or separation of an attribute, whether accidental or essential, from a subject, but upon the direct comprehension of the subject itself. This kind of truth obtains in the conception of the essential or permanent nature (εἶδος) of a thing. Here there is no possibility of separating what is combined, or of combining what is separate; and, therefore, we must either think the object as it is, or not think it at all. Truth, in this case, consists in the conception by reason (νοῦς) of the 'essence' of a thing, whereas truth in the former two cases, consists in the validity of the judgments we make, and depends upon the discursive intellect (διανοία). It is only by a loose use of words that we can speak of 'error' in connection with the activity of reason (νοῦς); for 'error,' as correlative to 'truth,' implies that we may either combine what is actually separated, or separate what is actually combined, whereas reason cannot err in regard to the 'essence' of a thing, but must either have or not have a comprehension of it. The 'essence' or permanent nature of things is not subject to change; for, if it were, we should have to maintain that reality may originate from nothing; and, as this is inconceivable, we must hold that there are permanent 'forms' of reality, which are presupposed as actual in whatever becomes or ceases. Here, therefore, we cannot fall into error, though we may have no knowledge of the 'essence' of things. Nor is such absence of knowledge absolute; it is not like 'blindness,' which excludes the possibility of sight, but implies the potentiality of knowledge, a potentiality which is realised when reason comes to a knowledge of itself. Our conclusion, then, is, that judgments which refer to the combination or separation of accidents in a thing, since they are not universal, do not reach the stage of science; and that science contains either judgments which express the necessary combination or separation of attributes as involved in a thing, or conceptions of the essential or permanent nature of real things.[1]

3. *The Fundamental Characteristics of Reality.*

We are now in a position to deal more directly with the problem of Metaphysic: What are the principles of reality as such?

[1] *Met.* E. 4, 1027[b] 17–1028 5; Θ, 10, 1051[a] 34–1052[a] 11.

As we have seen, there is no science of the 'accidental,' or, what is the same thing, science must deal with the essential nature of reality as embodied in universal and necessary judgments, or as expressing the primary conceptions of reason. What then is the essential nature of reality?

Now the 'real' as such is commonly characterized in certain universal ways, *e.g.*, as 'substance,' as 'quality,' or as 'quantity.' The primary meaning of reality, however, is 'substance,' for all other determinations are referred to 'substance' as the necessary presupposition of their reality. By 'substance,' then, we mean that reality which is the primary basis of all other determinations. Whenever we speak of something as 'real' without qualification, we think of 'substance.' The reason is obvious, when we consider that 'substance' is 'primary' in all the senses of the term. (1) It is 'primary' in the sense that we cannot *define* what is not itself 'substance' without introducing the conception of 'substance.' (2) It is also 'primary' in the sense that we can have no *knowledge* of a determinate thing unless we know 'what' it is, as distinguished from what merely belongs to it. (3) Lastly, it is 'primary' in the sense that whatever originates presupposes 'something' which does not originate; this 'something' being what we call 'substance.'[1]

'Substance' being thus the necessary presupposition of all real conception, knowledge and existence, the main object of Metaphysic must be to determine the true nature of 'substance.' Now, earlier thinkers conceive of 'substance' either as (1) the 'essential nature' of things (*τὸ τί ἦν εἶναι*), or as (2) that which is universal (*τὸ καθόλου*), or as (3) the 'genus' or 'class' to which things belong (*το γένος*), or as (4) the 'primary basis' or 'substrate' of things (*τὸ ὑποκείμενον*). It will be convenient to begin with the last.

(1) *Is Substance the Substrate of Things?*

The question as to whether 'substance' is the 'substrate' of things comes to this: Is 'substance' that of which certain characteristics are predicated, but which is never itself predicated of anything else? At first sight this conception of 'substance'

[1] *Met.* Z, 1, 1018[a] 10–[b]2.

seems to agree with the nature of real 'definition;' for 'substance' is certainly presupposed in every 'definition,' and, therefore, it cannot be referred to anything more primary. But, though no doubt 'substance' is the primary basis or substrate of all predication, this is not an adequate conception of it. Is this 'primary basis' the 'matter' (ὕλη), or the 'form' (εἶδος), or the concrete thing (τὸ σύνολον)? To answer this question we must specify what we mean by 'primary basis.' If it merely means that which cannot be predicated of anything else, why should not 'matter' be regarded as 'substance?' Corporeal substances, *e.g.*, have certain affections, and produce or are capable of producing certain changes, and they also possess length, breadth, and thickness. All these we predicate of them, but these are not their 'substance.' What, then, is their 'substance?' Apparently, that indefinable 'something' which remains after the elimination of these predicates, and this 'something' must be the 'matter.' Now, it would make all knowledge and reality unmeaning if we identified it with the indefinable. We must, therefore, seek for a more adequate definition of 'substance' than that which says that it is the 'substrate' of all determinations. No doubt it is so, but this is not its essential feature. 'Substance' is rather that which is 'separable' (χωρίστος), not from all determinations but from such determinations as those of quantity and quality. It is, therefore, not indeterminate like 'matter,' but essentially 'determinate' (τόδε τι). When 'substance' is thus conceived, it is obvious that it must be either the 'form' (εἶδος) of things, or the 'formed matter' (τὸ σύνολον). We shall, therefore, enquire whether 'substance' is the 'form' or the 'formed matter.' And, as it is usually admitted that there is something 'substantial' in sensible things, we shall in the first instance limit ourselves to these, reserving the question as to the existence and nature of supersensible things to a later stage of the enquiry.[1]

(2) *Is Substance the Form or the Formed Matter?*

After his usual method, Aristotle begins his discussion of the question as to whether the substantial reality of things consists in

[1] *Met.* Z, 3, 1028[b] 33–1029[a] 34.

their 'form' (εἶδος), or 'essence' (τὶ ἦν εἶναι), or in the 'formed matter' (τὸ σύνολον), by a review of current conceptions. The 'essence' of a thing, it will be said, is what the thing is *in itself* (καθ' αὑτό), as distinguished from what it happens to be under certain changing circumstances. What a thing is 'in itself' we must understand to be what is inseparable from its existence. Hence what is 'accidental' cannot belong to it 'in itself.' No doubt we sometimes say that a surface is white 'in itself,' meaning that it is the surface, not the interior of the body, which is white; but of course 'whiteness' does not belong to the 'essence' of a surface, which need not be white. The 'essence' of a thing therefore belongs to the thing 'in itself,' in the strict sense that the thing cannot be otherwise. And as the 'essence' must be 'determinate,' it can only be expressed in a conception which 'defines' or 'determines' what it is 'in itself.' You cannot 'define' a thing by predicating quality, quantity, time, place, or motion of it; you must in your definition express *what* it cannot but be, and unless you state what distinguishes or characterizes it you do not define it. Hence the 'definition' of a thing cannot be expressed in the genus alone, but only in the genus together with the 'differentia.' Man, *e.g.*, cannot be defined as 'animal,' but only as 'two-footed animal.' A 'definition,' then, in the strict sense of the term, is a conception of what a thing is 'in itself,' as a determinate thing, not what it may happen to be, or of the genus to which it belongs. Hence, only a 'substance' can properly be 'defined.' In a secondary sense, however, all determinations of a thing may be said to 'define' it, because, though they do not express what it *must* be, they express what it is under certain conditions.[1]

To the doctrine that the 'essence' of a thing is that which is inseparable from its existence, the objection may be raised that there are cases in which a thing cannot exist without a certain characteristic, and yet this is not contained in its definition. There is no obliquity of vision without the eye, or equality without quantity, or sex apart from the animal, but 'obliquity,' 'equality,' and 'sex' are not part of the 'definition,' and yet they

[1] *Met.* Z. 4, 1030ᵃ 17–ᵇ 4.

seem to belong to the 'essence' of the thing. Aristotle's answer is, that such characteristics do not belong to the 'essence' of the thing in the sense that they are contained in its 'definition,' but are merely 'inseparable accidents;' they are predicated of it, not involved in its conception, and therefore they are not part of its definition. A definition, we must therefore observe, not only expresses what *belongs* to a thing 'in itself,' but what the thing *is* 'in itself.'[1]

So far Aristotle has contended (1) that the 'reality' or 'substantiality' of things must not be sought in their 'matter,' but in their 'form' or 'essence;' (2) that this 'form,' unlike the 'matter,' is 'determinate' (τόδε τι); (3) that the 'essence' is expressed in the 'definition,' which states, not the 'genus' or 'class,' but the 'species;' (4) that the 'essence' excludes all mere predicates of a thing, even when these are inseparable from the thing. Already, therefore, he has indicated his divergence, not only from the physical philosophers, but from the Platonists. He agrees with the latter in denying that reality can be found in the indeterminate 'matter' or in the 'accidents' of a thing, and in affirming that it must be sought in the 'form' or 'essence;' but, in maintaining that the 'form' is 'determinate' and that the conception of the 'form' is expressed in the 'species,' not the 'genus,' he has prepared the way for his own theory. For the Platonists regard the 'form' as the 'genus,' and therefore they make it abstract; whereas Aristotle, holding that the 'form' is the 'species,' makes it the differentiating characteristic of the real thing. Thus he has prepared the way for his own doctrine, that the 'essence' constitutes the specific nature of things themselves, and therefore cannot be separated from them. It is this last point that he now goes on to accentuate.

Is the 'form' or 'essence' separable from the thing, or does it not rather constitute the very nature of the thing? As we have seen, a thing is not dependent for its reality upon the accidents which it may at any given time possess. The existence of a man does not depend upon his being 'white,' and therefore we cannot say that 'to be man' is 'to be white man.' In the con-

[1] *Met.* Z. 5, 1030^{b} 14–1031^{a} 14.

ception of a man as a 'two-footed animal,' the essential nature of the man is defined, but in predicating 'white' of a 'man' we merely state what may or may not belong to him. The conception of 'man' involves or is identical with the conception of 'two footed animal,' but it does not involve the conception of 'white.' Hence we cannot pass from one 'accident' to another. Because a 'man' is 'white,' it does not follow that he is 'musical,' for any accident may or may not belong to a subject. Now, if the conception of a thing is identical with its 'essence,' it is obvious that the 'essence' cannot be separated from the thing. Hence the Platonists, who make this separation, destroy both knowledge and reality. How can we know a thing without knowing what it actually is? But we cannot know what it actually is, if the 'essence,' without which it is inconceivable, is separated from it and given an independent existence? Nor can the thing exist apart from its 'essence.' If we say that a thing is 'good,' we must mean that the thing itself realizes the 'end' which constitutes its real nature; but if, with the Platonists, we make this 'good' of the individual an abstract 'good,' we take the life out of the thing, and it ceases to be 'good.' If we say that a thing 'exists,' we must mean that the thing itself 'exists;' but if we make 'existence' something separate and independent, the thing itself can no longer be said to 'exist.' If we say that a thing is a 'unity,' we must mean that this determinate thing is 'one;' but if 'unity' is separate from the thing and exists by itself, the thing ceases to be a 'unity.' Either the reality of a thing is constituted by its 'essence,' or it has no reality. The impossibility of separating the 'essence' from the thing of which it is the 'essence,' is at once evident if we give to each a different name; for a difference of name indicates a difference of conception. There must, therefore, be a conception of the individual substance, and a conception of the 'essence,' and each will be exclusive of the other. But the 'essence' is itself held to be a 'substance,' having an individual reality, and, therefore, we must have the conception of *its* 'essence,' and so on *ad infinitum*. Thus we never reach a conception of the real 'essence' at all. Why should we not admit at once, what we have to admit in the end, that in the con-

ception of the 'essence' we know the actual nature of the thing? In truth, there is no distinction in thought between the 'thing' and its 'essence,' and, therefore, to know the 'thing' is to know its 'essence,' to know the 'essence' is to know the 'thing.' We must, however, deny that knowledge of the 'essence' involves knowledge of the 'accidental' characteristics of a thing. If that were true, we should lie open to the sophistical objection that as the accidental states of a thing are infinite, there is no identity in things. This objection we avoid by maintaining that the identity of a thing consists in its unchanging 'essence,' which is unaffected by the changes in its accidental states.[1]

There can be no reality, then, and no knowledge of reality, unless things have a permanent or essential nature which can be grasped by thought. But sensible things originate, and we have, therefore, to reconcile the permanence of their 'essence' with their origination. If the 'essence' does not originate, how is origination to be explained? To prepare the way for an answer to this question we must distinguish the various forms of origination. Things originate either by 'nature' (*φύσει*) or by art (*τέχνῃ*), or spontaneously (*ἀπο ταὐτόματου*). The explanation of the origination of things, however, in all cases involves an answer to these three questions: (1) 'by means of what' (*ὑπὸ τίνος*) did this thing come into being? (2) 'out of what' (*ἐκ τίνος*) did it arise? (3) 'what' (*τί*) did it become?

(*a*) In explaining what is involved in the generation of 'natural' things, Aristotle confines himself to organized beings. For, though 'natural' things, in the widest sense of the term, include inorganic things, these do not originate, and, therefore, we may say that 'natural' origination is always the process by which organic things come into being. (1) 'By means of' what does an organized being originate when it arises by 'nature' and not 'spontaneously?' Obviously by the intermediation of another organic being of the same type. The two things in fact are called by the same name because they belong to the same species (*εἶδος*). Here we have an instance of a name being applied *συνώνυμως*; they get the same name because they

[1] *Met.*, Z. 6, 1031ᵃ 15–1032ᵃ 11.

have the same essential nature. (2) 'Out of what' does an organized being originate? It originates 'out of' something which contains potentially what it becomes. The potential 'nature' of the thing we therefore call its 'matter.' The 'seed' is the 'matter' of the plant or animal, or the seed is the 'material condition' of the developed thing. (3) 'What' (τί) does the thing become? It becomes actually what its 'nature' permits it to become. There is in it a formative principle which operates under the conditions involved in its 'matter,' and so far as this principle is realized, its 'nature' is realized. Only when so realized is it a 'substance,' with an individual or determinate 'nature.'

(*b*) Artificial things, unlike 'natural' things, have no formative principle in them, and are produced only by the agency of a being external to them. (1) The 'means by which' they are produced is the human agent, in whose will it lies whether they shall or shall not come into being, and who brings them into existence by the exercise of his intelligence in accordance with the principles of a particular art. Just as the name of an organized being expresses the peculiar principle operative in it, so the human agent receives his name from the art he exercises. (2) That 'out of which' the artificial thing is produced is the 'matter,' which must be capable of taking on a certain form. Thus, the human agent is limited by the 'material conditions,' just as the 'natural' being is limited by its 'matter.' (3) The object which is realized is the 'form' given to the special 'matter.' As this 'form' must first exist in the mind of the agent, we may say that in a sense the 'form' arises from the 'form.' Even when the agent produces something out of its opposite—as when the physician produces 'health' out of 'disease'—the principle is the 'form' as conceived in his mind. In bringing the thing into existence, the agent makes a regress in thought from the end to be attained, until he reaches the idea of something which he can effect, and, starting from this point, he sets in operation a train of causes which may result in the realization of the 'form.' The 'form' is thus at once the 'beginning' (ἀρχή) and the end (τέλος).

(*c*) In 'spontaneous' origination, a thing comes into being neither by 'nature' nor by 'art,' though it may in other cases arise

either 'naturally' or 'artificially.' (1) That 'by means of which' a thing arises 'spontaneously' is the 'matter' not the 'form.' What so arises is due neither to the operation of the formative principle of 'nature,' nor the intelligent principle of 'art,' but to accident. Thus, 'health' may arise, without the intervention of the physician, by the 'spontaneous' occurrence of 'heat,' which may be the first step to 'health' or even a 'part' of 'health.' (2) That 'out of which' the 'form' arises is the 'matter,' which, however, in this case is also that 'by means of which' the 'form' arises. (3) What comes into being is the 'form.' Thus, 'health' is the 'form' which results from the 'spontaneous' action of 'heat.' [1]

Now it is evident from this analysis of the three modes in which origination takes place, that in no case is there any origination of the 'form' *per se*, or of the 'matter' *per se*. Whether the origination is 'natural,' 'artificial,' or 'spontaneous,' what comes into being is the concrete individual, as the union of 'matter' and 'form.' This is confirmed by the fact that we name a thing by reference to the 'matter,' but in such a way as to indicate that the 'matter' has received a certain 'form.' We do not call a statue 'stone' (λίθος), but 'of stone' (λίθινος); which indicates that the statue is not 'matter,' but 'formed matter.' The same thing is shown where the thing which is produced arises out of the opposite. When a man is cured by a physician, we do not call him 'diseased' but 'healthy,' although the 'diseased' man is the 'matter' out of which the healthy man is produced. The reason plainly is, that we recognize that there has been a transition from 'privation' to 'actuality,' resulting in the production of a transformed 'matter' or concrete individual. There is, therefore, no production of either 'form' or 'matter,' but only of a 'determinate being' (τόδε τι). And we can readily see that the 'form' cannot be produced. If it were produced, it must be produced 'out of' something; but this something must have 'form,' and must, therefore, itself be produced, and so on *ad infinitum*. There is, therefore, no origination of the pure 'form,' but only of the 'formed matter' or the concrete individual. This holds good in

[1] *Met.* Z 7, 1032[b] 23–1033[a] 2.

all cases; for, as we have seen above, what originates 'naturally' or 'spontaneously,' as well as what originates 'artificially,' is always a 'determinate thing,' not a pure 'form.'[1]

Now, if there is no origination of a 'pure form' but only of the concrete individual, the Platonic doctrine evidently fails to explain how there can be any process of generation. Its 'forms' or 'ideas' are eternal and unchanging, and the whole process of generation is therefore left unexplained. If 'ideas' are 'beyond' individual things, as the Platonists admit, the origination of individual things is inexplicable, for origination is the becoming of individual things which are neither 'matter' nor 'form,' but a union of both. It is no doubt true that the thing 'by means of which' something comes into being may be identical in 'form' or 'idea' with that which it produces. All natural things are of this character; a 'man,' *e.g.*, produces a 'man' of the same 'form' as himself. But this does not show that there is only one 'form' of 'man' which exists *per se*. The identity of two things is not their numerical sameness, but their identity of type. The 'man' who is productive of another 'man' is a distinct individual, existing under particular 'material' conditions, though both agree in possessing the same 'form.' Thus, all generation implies a particular 'matter,' and, indeed, this particularity of the 'matter' is the condition of the separate existence of each thing. If there were nothing but 'form,' there would be no definite individuals.[2]

We have thus seen that there is no origination of the pure 'form,' but only of the individual substance. It may similarly be shown that in all the other modes in which the process of the world is displayed, there is no origination of the fundamental relations by which things are characterized. An individual thing may undergo a change of quantity or quality, but quantity and quality do not themselves change. There may be a change in the quality of 'wood,' but not in quality itself. An 'animal' may increase or decrease in size, but quantity itself does not increase or decrease. The same principle therefore applies to all changes, whether these consist in the generation of substances or in the

[1] *Met.* Z. 7, 1032^{b} 23–1033^{a} 1; 1033^{a} 5–23; 8, 1033^{a} 24–^{b}19.
[2] *Met.* Z. 8, 1033^{b} 29–1034^{a} 8. Cf. *E. N.* X, 1174^{b} 11.

changes of substances themselves, namely, that nothing changes except that which is determinate; the only difference being that an individual substance is always produced by another substance of the same nature, whereas changes in quality, quantity, etc., occur in each substance after its origination.[1]

The whole gist of Aristotle's reasoning lies in his contention, that the 'substance' of actual things is not the pure 'form' but the concrete individual. This does not mean, as is abundantly clear, that the real is the individual as it presents itself to sense at some given moment, but the individual which in all its changes maintains its permanent and indestructible 'nature' or 'form.' Things arise and perish, but to exist at all they must obey the law of their being. Aristotle is a thorough Platonist in denying that the reality of a thing is exhibited in the phases which it displays from moment to moment. What a thing is can only be known by grasping the 'form' which characterizes it, and governs the whole of its process. The individual is by 'nature' of a definite and unchangeable type, and beyond this type it cannot pass. No doubt there are exceptions to this law, arising from the failure of the formative principle to master the material conditions; but so far as an individual can have any real existence, it conforms to the universal type of its class. On the other hand, the type or species has no separate existence, and the confusion of the individual with the type is the *πρῶτον ψεῦδος* of the Platonists. Because the real nature of a thing cannot be known from its temporary phases, they were led to suppose that the only reality is that of the universal 'form,' not seeing that the 'form' *per se* is no more real than the 'matter.' The only real existence is the individual. How, then, is one individual differentiated from another? If each individual is real only because in it the formative principle of the species is operative, and if this principle is identical in every member of the species, must we not hold that the only reality is the species? If every 'man' is a 'two-footed animal,' and his being so constitutes his reality, what is there to distinguish one individual from another? Aristotle accuses the Platonists of making the 'genus' the only reality; is it any im-

[1] *Met.* Z. 9, 1034^{b}, 7–19.

provement in principle to make the 'species' the only reality? Does he not unwarrantably assume that there are distinct individuals, whereas he ought to say that there are only distinct 'species'? Aristotle's answer is, that the 'substance' of the individual is not the 'essence' or 'type,' though there is no individual without it, but the 'essence' or 'type' as realized under conditions peculiar to each individual. These conditions cannot be precisely specified, because each individual differs in numberless ways from every other, but we can express them summarily by the term 'matter.' By 'matter' he therefore means the totality of conditions by which each finite thing is determined as finite, and which make its existence unique. Were there no such conditions, there would not be a number of individuals. 'Matter' is thus the condition of distinction and finitude; and, as we shall afterwards see more distinctly, where there is no 'matter' there is only a single reality which is pure 'form' or 'actuality.' Each finite thing, however, realizes its type only under conditions peculiar to itself, or, in Aristotelian phraseology, 'matter' is the principle of divisibility? This being so, the finite being is always individual and concrete (*συνόλον*), a being existing under particular conditions. It is for this reason that Aristotle insists so strongly and repeatedly that neither the 'form' nor the 'matter' as such can be generated. If the 'form' were generated, we should have a creation or absolute origination of reality out of nothing, and to Aristotle this seems utterly inconceivable; if 'matter' is supposed to be generated, we fall into the equal absurdity of speaking of 'conditions' as existing where there is nothing of which they are 'conditions'; for 'matter' has no existence *per se*, but is merely the limit of real things. What is generated is always a concrete thing, possessing the inalienable characteristics of its type, but limited by conditions which the formative principle working in it cannot transcend. The whole process of generation is from concrete individual to concrete individual; at least this is true of all natural and artificial products, and it is so far true even of things which arise 'spontaneously' that the product, though not the cause, is always a concrete individual. Certainly things arise 'by means of' one another, but the thing which comes into being,

like that which produces it, has an individual existence of its own. So firmly is Aristotle convinced that individuality is the basis of all finite reality, that he applies the same principle in explanation of the changes which things undergo during the course of their individual life. There is no process in abstract quality, or quantity, or time, or place. The nature of these abstract 'relations,' if we may so term them, can be expressed in universal propositions, but they have no reality in themselves. Every real determination of things is a determination of the individual. We have even less right to hypostatize 'quality,' or 'quantity,' or 'time,' or 'space,' than to hypostatize the 'essence' of things. Things conform to the laws of these universal characteristics just as they conform to their type, but the reason is that they are determinations of things viewed in the abstract medium of thought, apart from their reality as embodied in things. The actual world is thus, for Aristotle, a world of individual things, each bearing within itself the universal nature of its species, but having an existence of itself and passing through its own cycle of changes. We are here, however, met by a difficulty. If all science is of the universal, and all reality is individual, how can there be a science of reality? To answer this question we must first consider more carefully what is involved in definition.

There can be no knowledge unless thought is capable of grasping the 'form' of things, for the 'form' is essential to the existence of the individual, and the individual is the real. This comprehension of the 'essence' is 'definition' (*ὁρισμὸς*); it is the meeting-point of thought and reality. Now, a 'definition,' like every other 'conception' (*λόγος*), involves the combination in thought of distinguishable 'parts' or 'elements,' and a conception will take its distinctive character from the nature of the 'parts' or 'elements' so combined. But what are we to understand by these 'parts?' The term 'part' has various meanings. In one sense a 'part' is a unit of measure, *e.g.*, an inch, a pound, a degree. As we are here dealing, not with quantitative relations, but with 'substance,' it is evident that a 'part' in this sense is irrelevant to our enquiry. Our present question is: What is meant by the 'parts' of 'substance?' for 'substance' is the main

object of Metaphysic. Obviously, the answer will depend upon what we mean by 'substance.' If by 'substance' is meant the concrete thing (*τὸ συνόλον*), then by the 'parts' we may mean the 'matter,' as a distinguishable element in the whole. And this will hold good whether the matter is something sensible or is only an object of thought. Thus, in the concrete statue, the 'matter' may be 'brass,' and this is a 'part' in the sense that it is an element in the integral whole. Or, again, in a circle, the 'matter' may be the segments without which the individual circle cannot exist. Now, the brass or the segments, though they are conceived as part of the concrete thing (*συνόλον*) are not a part of the form. The conception of the statue, as it exists in the mind of the sculptor, or of the circle as present to the thought of the mathematician, has no 'matter,' and, therefore, its 'parts' must be purely ideal. This is the universal character of all conceptions in which 'parts' of the form are grasped by thought as 'parts' of an ideal whole. Now, it is only in such conceptions or definitions that thought grasps the 'essence' of things. Matter *per se* is indefinable because it has no fixed and determinate nature, and, therefore, it cannot aid in the definition of the real, which as real is determinate. It is not a definition of 'man' to say that he has bones and sinews and flesh, because these are not 'parts' of the form or essence of 'man,' but of the matter, and the matter does not determine the nature of 'man.' Hence the definition of a thing must express its 'essential' nature or 'form.' And a definition consists of 'parts' combined into unity. Thus, to define the acute angle is to conceive of it as a 'part' of the right angle; the definition of a semi-circle is the conception of it as 'part' of a circle; the definition of a finger presupposes the conception of the whole organism, of which the finger is a 'part.' It is, therefore, by the conception of 'parts' as combined in a whole that the 'essence' of a substance exists for thought. There can be no conception of 'animal' without the conception of 'soul' as the unity which is differentiated in the various functions of animal life. We must, therefore, distinguish the conceptual 'parts' as combined in a unity from the 'parts' of the body as such. The

latter do not define the nature of the animal, and hence, apart from the conception of the soul as the combination of the functions of which they are capable, they are merely 'matter,' *i. e.*, the conditions under which the 'soul' operates. We call heart and brain and hand, as physical things, by the same name as these conceived in their functions as 'parts' of 'soul;' but they are the same only *ὁμωνύμως*, not *συνωνύμως*. The definition of a thing is, therefore, the conception of the 'parts' of the 'essence,' in the sense just explained. Hence, we cannot 'define' the concrete thing, but only the 'essence.'[1]

There is a certain difficulty in determining what are the 'ideal' as distinguished from the 'material' parts. This difficulty does not arise where the same 'form' is found combined with different 'matter,' but only where the same 'form' is always united with the same 'matter,' as in the case of the human organism. Certain thinkers, observing this fact, have been led to separate between 'form' and 'matter' in an illegitimate way. Thus the Pythagoreans hold that the continuous lines of the triangle, circle, etc., belong to the sensible 'matter,' while their 'form' consists only in numbers or is discrete. The Pythagorean view compels us to regard as identical such different things as the number 2 and the line; and hence it logically leads to the conclusion that all things are identical in 'form,' however great their difference may seem to be; in other words, that there is no difference between one thing and another; which is absurd. This untenable doctrine shows how difficult it sometimes is to separate the 'form' from the 'matter.' There are cases where the 'form' can only be conceived as combined with a certain 'matter.' 'Man,' as sensitive being, cannot be conceived without sensitive 'parts,' and these 'parts' must be conceived as relative to functions of the 'soul.' The concrete 'man' is, therefore, the union of 'soul' and 'body,' and neither can be separated from the other.[2]

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[1] *Met.* Z, 10, 1034^{b} 20–1036^{a} 25.

[2] *Met.* Z. 11, 1036^{a}26–^{b}33; 1037^{a} 5–^{b}7.

THE LAW AND RESPONSIBILITY.

LEGAL responsibility is exactly equivalent to liability to punishment. The sole question in every case is: Is this person liable, by the law of the land, to be punished for the act which he has done? Properly moral obliquity does not enter, at least directly, into crimes. Crimes are injuries to the persons, property, or peace of people, and not offences against their conceptions of morality. The principal aim of public justice is to present persons innocent of offence with such examples as will deter them from becoming offenders. The criminal law is negative in its aim. The *lex talionis* may have been its origin; it is not now its animating principle. It does not contemplate retaliation or punishment for the sake of vengeance. It only attempts to furnish the convicted criminal with such memories of suffering as will prevent him from repeating his offence and, at the same time, to deter others by the example shown.[1] This negative principle determines the whole character of the criminal law. Thus it is that the heinousness of an offence in the eyes of the law can never be measured by moral standards. For example, to the moralist fraud must always be a more serious wrong than theft, since it involves at once greater intelligence and a fixed determination to evil, but the common law regards larceny as a felony, while fraud is only a misdemeanor.

Moral guilt does not determine criminality. Moral responsibility may exist without legal responsibility. Thus a child of six may steal, knowing that it does wrong, but English law refuses to regard such a child as capable of any crime. Equally legal responsibility may exist where moral responsibility is denied, as in certain cases of persons of unsound mind. But while legal responsibility does not correspond to the popular conception of moral responsibility, the law is not arbitrary in imputing liability to persons. It proceeds upon principles, and it is in determining those principles that the study of the law may afford profitable illustrations to the moralist.

[1] Cox, *Principles of Punishment*, p. 15.

In early times the conception of personality was veiled in obscurity. By ancient legislators the boundary line between persons and things was but roughly drawn. In the Mosaic code an attempt to punish chattels was frequently made. Thus, the ox which gored a man was to be put to death,[1] and the city where idolatry was committed was to be burned.[2] In part this confusion was undoubtedly due to the survival of the primitive belief that the man who fashioned an article imparted to it something of his own being. During the Middle Ages, pigs, rats, and other animals were prosecuted in the civil and ecclesiastical courts.[3] In 1403, a pig was solemnly imprisoned, tried, and executed in Paris for the murder of a baby. In 1474 a cock was burned at Basle for the crime of laying an egg. Even as late as 1731, some monks in Brazil brought an action against ants before their bishop and obtained judgment. Under the common law of England the punishment of chattels was represented by the deodand. According to that law, a personal chattel, as an ox or a cart, which was the immediate cause of the death of a reasonable creature was forfeited to the Crown, to be applied to pious uses by the High Almoner. The chattel did not become a deodand unless it was so presented by a jury of twelve men. This custom was only abolished by 19 and 20 Vict., chap. 62.

Similarly it has only been by a very slow process that the law has distinguished between the person and his family or the community in which he dwells. Primitive responsibility was corporate, like that which still prevails among the Chinese. The entire family was responsible for the crimes of each of its members. The forfeiture of the property and the attainder of blood of persons adjudged guilty of treason or felony (only abolished 32 and 33 Vict., chap. 23), were in effect and design punishments of families for the crimes of their members. It was considered that the falling tree carried down its branches with it. A person attainted was not only legally dead so that he could not sue in any court of justice, his property was forfeited and his blood was corrupted so that nothing could pass by inheritance to, from, or through him.

[1] *Ex.* XXI, 28. [2] *Deut.* XIII, 16.

[3] *Cornhill Mag.*, July, 1897, "Legal Proceedings against Animals."

In general, however, it may be said that the individual is now responsible only for his own acts, and the law endeavors, so far as possible, to make the punishment fall on him alone.

As the distinctions between persons and things, and between the individual and his community were clumsy and inexact, so, too, the distinction between person and human being was somewhat unsatisfactory. For the purposes of the law a human being is not necessarily a person. In the strict legal significance of the word, a person is one clothed with a certain status and capable of having, and becoming subject to, civil rights.[1] Under the Roman law a sharp distinction was drawn between *homo* and *persona*. Whatever might be a man's natural capacity, if he was unable to exercise his reason and his will, the law would refuse to regard him as a person. The slave was only a *res* and not a *persona*. On the other hand, there were many *personæ* who were not *homines*. Abstract conceptions, like the state, the treasury, corporations, had the capacity for civil rights and were considered by the law to be *personæ*.[2] The position of persons might vary widely. Status was the correlative of *persona* and indicated the legal standing of the person. For the full enjoyment of civil rights the Roman law required that a man should possess the *tria capita*, the status *libertatis, civitatis, familiæ*. The man might suffer the loss of the status *familiæ*, the *diminutio minima*, or the loss of the status *civitatis*, the *diminutio media*, and the personality still continue; but the *diminutio maxima*, the loss of the status *libertatis* at once abolished the personality.[3] Upon the continuance of his freedom every other right depended.

The complex associations of life compel the jurist to take account of many variations of personality. The moralist, when considering a problem, does, as a matter of fact, isolate it, treat it as a phenomenon with a certain limited number of relations, thus giving it an artificial simplicity. Not so the lawyer. The nature of his task compels him to regard each case as possessed of an almost infinite number of relations, as distinguished

[1] Mackenzie, *Roman Law*, p. 75.

[2] Sandar's *Justinian*, Intro. sec. 37.

[3] Kaufmann's Mackeldey's *Modern Civil Law*, Vol. 1, p. 131.

from every other case by a mass of minute details. He is forced to regard a multitude of phenomena ignored by the moralist.

The Roman jurists spoke of the *persona* as a being capable of having, and being subject to, rights. But that was not the only meaning of the word in Roman law. Indeed, it was only its secondary meaning. The jurists were always true to the etymological significance of the word. As they had borrowed the term from the theatre, where it had been applied first to the masks worn, and then to the characters represented by the actors on the stage, so they always applied it to indicate not so much the actor himself as the parts which he played in the drama of social life. In this sense the *persona* was not a man, but the relation sustained by him and in virtue of which he possessed civil rights. An individual might thus sum up in himself as many *personæ* as he had legal characters. He might be *persona patris*, *tutoris*, or *mariti*, as he was regarded in his varying characters as father, tutor, or husband.[1] The same principle, though without the technical terminology, is familiar to modern law. The principle underlying the entire law of principal and agent, is that of transferred personality. The human being acting in the capacity of an agent, is in that capacity clothed with the personality of his principal. *Qui facit per alium facit per se.* Only one capable of exercising civil rights can delegate authority to another. A lunatic or idiot is naturally, and an infant or convict legally, incompetent to appoint an agent. But the agent is not required to possess the same qualifications as his principal. Almost any person of sane mind, *e.g.*, an infant or a person attainted may be an agent. In the eyes of the law the agent is his principal, and the law will watch him jealously to see that he undertakes no duty or character incompatible with his position as an agent. Similarly, in the case of trusts, a trustee might be described as one whose personality is suspended, for he holds the legal estate as an instrument of the law for the performance of some definite duty rather than as a person. Thus it comes that an outlaw, who is one beyond the protection of the law and must be regarded as *civiliter mortuus*, may still legally act as an agent for a competent person,[2] or may

[1] Sandar's *Justinian*, Lib. I, Tit. III. [2] Evans' *Principal and Agent*, p. 16.

hold an estate under a trust imposed upon him before his sentence of outlawry.[1] At any moment a man might be in the eyes of the law dead, might be capable as a general agent of performing almost any act of life, might be an instrument of the law for performing some duty, or might even add another crime to his original offence.

This complexity and the lack of a distinct technical term, cause much confusion. Lawyers speak of natural and artificial persons, of physical and legal persons. In almost every Act of Parliament it becomes a matter of judicial interpretation as to whether the word 'person' is used in the narrow popular sense or in the wider legal meaning, a question which can only be determined by the consideration of the object of the Act in question.[2] The result of this confusion has been such that in one Act a corporation is, in another is not, included in the term 'person.' Under another act a married woman is not to be considered as a person, while under still another women are comprised in, and entitled to vote under, the phrase "every person of full age."[3]

For the purposes of the criminal law, 'accountable' may be said to be synonymous with rational, and 'person' may be defined as rational creature. Since it is the character of the intention which determines the character of the act, some degree of knowledge is necessary in order that any act may be a crime, but that degree may vary according to the nature of different offences. There are many circumstances under which acts, which would otherwise be crimes, are deemed innocent. Writers on criminal law usually class these cases as instances of irresponsibility. Such are, for example, the case of the man who slays another in self-defence, or the sheriff who hangs a murderer. Properly, however, these are not cases of irresponsibility. The person committing the act is responsible, but the act itself is not a crime. Leaving out of account the anomalous cases of the sovereign, who is above the ordinary criminal law, and of ambassadors, who are answerable to a foreign jurisdiction, the only genuine cases of irresponsibility

[1] Hill, *Trustees*, p. 80.

[2] Pharmaceutical Soc'y *vs.* Lond. and Provincial Supply Ass'n, 5 App. Ca. 857.

[3] Stroud, *Judicial Dictionary*, Art. "Person."

are those of persons who, through some defect or immaturity of reason, are deemed incapable of knowledge.

The first class considered as incapable of knowledge consists of persons of immature intellect. English law refuses to regard young children as rational creatures. The line is arbitrarily drawn at seven years. Under seven, children are absolutely unable to commit felonies, and no evidence can be offered to show that such a child is actually possessed of a mischievous discretion. Between seven and fourteen the presumption is that they do not possess the requisite degree of knowledge, but that presumption may be rebutted. Above fourteen, the child is presumed to be *doli capax*. But, whatever the age, infancy can only be pleaded in criminal cases as evidence of the absence of intention.[1] It was on this supposition, that a young child is not a rational creature, that one of the curious distinctions of the deodand depended. If a young child fell from a stationary cart and died, the cart was not forfeited; but if in the case of an adult the cart became a deodand.

It is in the case of people of unsound mind that the real debate as to responsibility arises. The presumption is that a man is of sound mind until the contrary is proven. As to the degree of unsoundness necessary to exempt a man from the consequences of his acts, there has been, and still is, much uncertainty. The early doctrine was undoubtedly harsh and narrow. As stated by Lord Onslow it was: "Where a man is totally deprived of understanding and memory, and does not know what he is doing any more than an infant, a brute, or a wild beast, he will be properly exempted from punishment."[2] That a man should only be exempted from punishment when he has no knowledge of what he is doing, is an extreme position. The true question at issue should be, not the man's knowledge of his act, but his knowledge of the moral and legal character of that act; hence the second position laid down as the test of insanity, the capacity to judge between right and wrong in the abstract. Lord Mansfield thus expressed it: "In order to support such a defence it ought to be proved,

[1] Harris, *Criminal Law*, p. 27.

[2] R. *v.* Arnold, Collinson, *Lunacy*, 475; 16, How. St. Tr., 764, 765.

by the most distinct and unquestionable evidence, that the prisoner was incapable of judging between right and wrong; that, in fact, it must be proved beyond all doubt that at the time he committed the act he did not consider that murder was a crime against the laws of God and nature, and that there was no other proof of insanity which would excuse murder or any other crime. That in the species of madness called lunacy. . . . . if such person be capable in other respects of distinguishing between right and wrong, there would be no excuse for any act of atrocity which he might commit under this description of derangement."[1] This doctrine, founding the test of sanity on a man's general capacity of distinguishing between right and wrong, made no allowance for that great class of cases arising from monomania, temporary or partial insanity. Since 1843, a third position has been maintained. This lays the stress upon the man's power of knowing right from wrong with relation to the very act for which he stands accused. As stated by Stephen it is: "No act is a crime if the person who does it is, at the time when it is done, prevented, either by defective mental powers or by any disease affecting his mind (*a*) from knowing the nature and quality of his act; or (*b*) from knowing that the act is wrong. But an act may be a crime, although the mind of a person who does it is affected by disease, if such disease does not in fact produce upon his mind one or other of the effects above mentioned in reference to that act."[2]

So much for knowledge. Since the essence of a crime consists in the animus with which it is committed, the absence of knowledge will excuse the act. But is there nothing else which will excuse it? Suppose there is sufficient knowledge of the nature of the act and of its wrongfulness, but self-control is absent. In the article just quoted Stephen adds after (*b*), "(or (*c*) from controlling his own conduct unless the absence of the power of control has been produced by his own default)." The clause is inserted in brackets to indicate that it is exceedingly doubtful if it is, or is not, law. There is no doubt about the second part of the clause.

[1] R. *v.* Bellingham, Collinson, *Lunacy*, 636; Shelford, *Lunacy*, 462.

[2] *Digest of Criminal Law*, Art. 27.

If the lack of self-control is due to the person's own act, he is still responsible. Voluntary drunkenness excuses no one. Equally, if a man of weak intellect permits himself to desire and brood over the death of another until the murderous passion becomes ungovernable, he cannot plead in extenuation of his act that he was under the influence of mental disease. Some words of Lord Denman might be advanced in support of the first part of the clause. "A person may commit a criminal act and not be responsible. If some controlling disease was in truth the acting power within him, which he could not resist, then he will not be responsible."[1] But the weight of opinion is against such a position. To punish a man for what he cannot help doing may be described as 'exquisite inhumanity,' but it is none the less law. Where there is no real delusion as to any fact, the absence of motive or the presence of an irresistible impulse affords no defence.[2]

Though this may seem harsh, it is in accordance with the whole spirit of the law. From what has already been said it is evident that, in the judicial conception of the term, personality consists in a relation sustained by a conscious being in a certain environment, and at once conscious of itself and of that environment. Consciousness and relation are the essential elements. There is nothing more, nothing higher. The law does not demand that the person shall consider himself as opposed to his environment, shall abstract himself from the conditions surrounding him, and, rising above the situation of the moment, triumph over the circumstances in which he is placed. Power does not enter into the idea. Everywhere the law is haunted by the conception of the average or 'ordinary' man. The ordinary man constitutes its standard of measurement. Is the individual a person, *i.e.*, is he conscious of himself and of the relation which he sustains to his environment? If so, has he acted in that relation as well as the ordinary man would have done? Should he fall short of that standard, the law troubles itself not one whit as to his power to have attained it. This conclusion is made clear by the consideration of several cases in which animus was en-

[1] R. *vs.* Oxford, 9, C. and P., 525. [2] Harris, *Criminal Law*, p. 23.

tirely wanting, and where it was clearly not in the defendant's power to do otherwise.

The first case is a prosecution for a commitment of a public nuisance. Generally a master is not liable for the wrongful acts of his servant, unless he has expressly commanded them, or has personally coöperated in them. In Regina v. Stephens,[1] however, it was held that, where the workmen of a defendant had stacked the refuse of a colliery so as to obstruct a navigable river, the defendant's orders to the contrary and his absence from personal control did not relieve him from liability. On behalf of the defendant it was urged that he was an old man, upwards of eighty, who, by reason of his infirmities, was unable to go to the premises where the business was carried on, that he had given his agents express orders not to place the refuse in the river, and had no knowledge that his orders had been disobeyed. Still it was held that the interests of the public were paramount. The action of his servants had become prejudicial to the public, and, despite his lack of power, he was held liable.

The other case is one of neglect of official duty. Courts have always been lenient to the failings of magistrates. Lord Mansfield declared that he would always lean towards favoring them. "If their judgment is wrong yet their heart and intention pure, God forbid that they should be punished."[2] But this does not apply when there has been a positive failure to perform some plain duty. Kennet was the Lord Mayor of London who failed to employ the military to suppress the Gordon Riots. On his trial for criminal neglect of duty, Mr. Erskine eloquently argued in his defence that while the Lord Mayor had the inclination to do his duty, in the moment of trouble he was so overcome by terror as to be incapable of action; his mind was distracted by threatened criminal proceedings and the horrors of massacre and murder. But the court replied that it is no defence in law to say that the defendant was not a man of sufficient capacity for the emergency; he occupied a position where the law demanded that he should

[1] L. R., 1, Q. B., 702; 35 L. J. Q. B., 251.
[2] R. *vs.* Young 1, Burr, 556.

be a man of ordinary firmness and, not being able to produce the justification of such a man, he must be found guilty.[1]

But while the law never permits a man to fall below the standard of the ordinary man, it never requires him to rise above it. A man coerced by a mob may join in many of their criminal acts without guilt. Similarly some acts done under pressure of necessity are excusable. A man may be so situated that, to avoid suffering some evil, he must inflict an evil. In such cases, if the evil inflicted is not disproportionate to the evil avoided, it will be excused. Self-sacrifice is not a legal duty; hence, in cases of shipwreck, where two men struggle for a plank, the successful man is held innocent of the death of the other, or where a boat is too full of passengers to float and some are thrown overboard, the survivors are not guilty of murder. The question is not whether some shall die, but whether any shall live. The principle is very indefinite and each case must be decided when it arises on its own merits. Its operation is confined within very narrow limits. It does not extend to the case of shipwrecked sailors who kill one of their number in order to eat his body.[2]

The consciousness of wrongdoing is the essential element in responsibility under the law. The power of the criminal to do, or to refrain from doing, the act complained of, is a matter of no importance. Personality is, for the law, conscious being in relation to a certain environment. Consciousness and position are both necessary to it, indeed the relation between them is personality. Granted a certain position, the law neither permits the human being in that position to fall below, nor requires him to rise above, a certain standard. Such is legal responsibility.

T. Wardlaw Taylor, Jr.

[1] R. v. Kennet 5 C. and P., 254; R. *vs.* Pinney, 3 B. and Ad., 947.

[2] See Stephen, *Digest of Criminal Law*, Art. 31, 32.

DISCUSSIONS.

THE DUKE OF ARGYLL ON PURPOSE IN NATURE.

I PROPOSE here to examine the Duke of Argyll's views on Teleology and Natural Selection, as set forth in the first part of *The Philosophy of Belief*, under the heading of "Intuitive Theology." The following passages give the gist of these views, and at the same time are fair samples of the author's methods of argument:

"Natural selection, as an agency in developing structures prior to their functional use, if it has any meaning at all, is simply a mental and directing choice. All the plausibility it possesses, as a phrase, rests upon, and consists in, its implicit reference to the analogies of mind. It is plain, therefore, that the somewhat refined and subtle objection to the old argument from design, that it represents the mind which is supreme in Nature as the mind of a mere artificer, is an objection which rests on incomplete analysis. It confounds the high functions of a conceiving mind, with the far lower functions of a mere executive mechanic."[1]

"There is a wide gap, in this respect (*i.e.* as regards purposive arrangements) when we pass from the organic to the inorganic world. The adaptations in the inorganic world are as pervading as in the organic, and are indeed, to a large extent, the same, inasmuch as the adaptation of organisms is, and must be, an adaptation to conditions in the external world. They are parallel and correlative. But, in the inorganic sphere, they are what we may describe as general, and not particular. The adaptation of mineral carbon, for example, in the shape of coal, to the wants of man, is a conspicuous example. Coal is, indeed, in its origin an organic product. But it belongs to the inorganic world now. The preparation of it and the storage of it as a source of energy in the bowels of the earth, has had an obvious purpose in the function it now discharges . . . In that higher world [of organic nature] itself, as we have seen, purposive adaptation is no matter of mere inference, but is so much the object of direct perception that the most ordinary descriptions of phenomena, as well as the most recondite and scientific, cannot escape from the recognition of it. But the indisputable unity of Nature precludes us from supposing even the possibility of this characteristic being confined to one region of Nature alone. What Professor Osborne says so

[1] *The Philosophy of Belief*, pp. 17, 18.

forcibly of the organic world, is equally true of the inorganic, when we regard it in all its parts, namely, that the infinite complexity of its arrangements and adaptations 'preclude the possibility of fortuity.' The organic is in this matter the key to the inorganic."[1]

The indisputable unity of Nature precludes us from supposing even the possibility of this characteristic being confined to one region of Nature alone. Is the step, here made in so off-hand a manner, from a part to the whole of Nature, in truth justifiable? This is the question which really goes to the root of our author's argument. It will be time enough after answering it, to see how far he is justified in his initial contention that the purposive character of organic adaptations is comparable to that of human contrivances. At present, for the sake of argument, we will let that pass. But, we ask, can we intelligibly speak of purpose as pervading the *whole* of Nature? Is it not true, rather, that the entire point of asserting any action or disposition of things to be purposive, lies in the fact that we thereby *contrast* it with what our author himself calls "the blind and mechanical action of the physical forces"?[2] Here, so it seems to me, we have real difficulty in answering the question whether design is universal—a difficulty often inadequately expressed in the form of a doubt as to the competence of the human intellect to grapple with problems of this nature.

More than one passage could be cited, did space permit, to show how the Duke of Argyll first gives a meaning to the word 'purpose' by pointing a contrast between processes of a purely physical character and those indicative of mind, and then goes on to maintain that one particular side of this distinction must of necessity be suppressed. Perhaps, however, the following passage (in which the italics are mine) is the best suited to make the whole procedure plain. "The recognition of a mind is the recognition of something that we know, and the one leading feature by which we do so recognize it is purpose. We know this better than we know anything else in the world. It is identified with the ordinary action of our will. It is, in short, all that constitutes what we call ourselves, our individuality, our personality. *It differs essentially from all that we can see in the physical forces*, and it agrees with all that we do most certainly know as characteristic of ourselves in the use we make of these forces as the only tools with which we can work out our own designs. Here, *therefore*, we see again, not as a consequence worked out by argument, but as a part of the fact which is directly seen, that we have the dis-

[1] *Op. cit.*, pp. 175, 176.

[2] *Op. cit.*, p. 11.

tinct conception of a personal mind *as an object of our immediate recognition in the whole of Nature.*"[1] That this result cannot be said to have been "worked out by argument," is painfully obvious; but is no recommendation to one whose powers of mental vision do not enable him to embrace, in one comprehensive view, two mutually destructive assertions.

Nor does the argument from the complexity of Nature seem any more successful. Quite the contrary. If the purposive or non-purposive character of phenomena could be shown to hinge on their mere physical complexity, this would simply amount to a demonstration of the automaton theory, with which Huxley and Clifford have made us familiar. That is to say, we should be compelled to refuse even to our own minds any power of controlling the course of physical events. For what justifies us in regarding mind as not merely revealed by, but as a real factor in the production of, say, a work of art, if not the belief that the physical activities therein involved cannot be made intelligible on purely physical grounds? In order, that is, to either anticipate or follow the actual doings of men, we must *supplement* our physical knowledge by our knowledge of mind; and so long as this can be upheld as the distinctive mark of purposive action, *but no longer*, the automaton theory may be regarded as a mere speculation. The light-hearted suppression of distinctions in the interest of theology is apt to provide its own nemesis.

Besides the distinction between purposive and non-purposive lines of action, the conception of design involves the distinction between means and ends. (Whether the terms of this last distinction fall strictly within the sphere of purpose, is a question we shall consider later.) The relation implicated in the last mentioned distinction is essentially one of subordination. To indicate any point in a system as an end, is so far to regard the other parts as existing *for its sake*. In biology, however, we have the conception of *the interest of the organism*, in virtue of which all the parts (and functions) of the organism are regarded as, in Kant's words, "reciprocally ends and means of each other." But what corresponding central idea is there in virtue of which we could treat the processes of Nature at large as even in such sense exhibiting this relation? In default of any such central idea, the solemn assurance that "it is a certain fact, and not a fancy, that in Nature all things are done by the use of appropriate means, and by the subordination of material structures to future work and function,"[2] cannot be made to yield any deeper signifi-

[1] *The Philosophy of Belief*, pp. 184, 185. [2] *Ibid.*, p. 11.

cance than this: that every effect is produced by the cause which really does produce it, and not by some cause which produces a different effect. Causality is, in fact, the necessary *prius* in the selection of means towards a given end; so that it is in the strictest sense preposterous to regard it as by itself sufficient to constitute the relation in question.

The only way in which so much as the semblance of adaptive arrangements in inorganic nature can be produced, is by illicitly extending that conception of 'the interest of the organism' which gives a meaning to the word 'adaptation' as applied to organic nature. But the reader, one may be pardoned for believing, must be singularly uncritical, who can be satisfied with what our author offers him on this head in the place of argument.

In a passage already quoted, we are told that "the adaptations in the inorganic world" to a large extent are such "inasmuch as the adaptation of organism is, and must be, an adaptation to conditions in the external world. They are parallel and correlative." As regards the general sense of this remarkable deliverance it should, I think, be sufficient to reply: that to regard the adaptation of organisms to the 'external world' as synonymous with the adaptation of those conditions *to them*, is to take up the point of view of the pious Irishman who thanked Providence for having arranged that navigable rivers should flow near large towns. All the same, let us glance at the 'conspicuous example' afforded by coal. What particular one of the many 'functions' which coal "now discharges" is the function (mark the question-begging word) which betrays "obvious purpose." Is it the function of providing fuel for the bunkers of our battleships? Is it the function of enriching the owners of coal mines? Is it the function of inducing men to spend their days underground, so that from time to time they may be blown to bits or buried alive?

"But," it may be said, "this is mere trifling. Of course the author—as is further shown by his mentioning 'the wants of man'—only means his remarks to apply to the effects of the use of coal so far as these are beneficial to humanity in general." No doubt. But what reason has he to show for singling out the beneficial effects as having been intended, rather than their (for us) indifferent or noxious accompaniments? None whatsoever; for it is idle to refer in this connection to the so-called 'preparation' of the effect. There is no occurrence, however trivial or however hideous, whose roots do not strike back into an infinite past.

The assertion, then, that coal has a purpose is a quite gratuitous

assumption. The assertion that the said purpose is obvious, must, to be even apparently intelligible, rest on the further assumption that the contriving mind is actuated by motives of benevolence. Of the first assumption, beyond the fact that it *is* such, we need merely remark that it is only made palatable by reason of the covert introduction of the second. The second assumption itself is flagrantly inconsistent with the author's reiterated disavowal[1] of any preconception as to the moral characteristics of the universal mind.

Considered in relation to the thesis our "conspicuous example" was to enforce, namely, that the transcendental purpose is really universal, the same assumption, inasmuch as it fastens on certain effects to the exclusion of others, is flagrantly inconsistent both with itself and with the facts of Nature. On page 174 of *The Philosophy of Belief* (to go no further afield in search of an example), we find it said that "the relation between teeth, or sets of teeth, and the function of seizing prey and tearing their flesh, is an object of direct perception and indisputable certainty." Seeing that it is on the adaptations in organic nature that the author rests his whole case, we have a sense of being trifled with when on the very next page we are asked to believe—with no more argument than is contained in the word 'obvious'—that the mind which planned the carnivorous type was benevolently concerned to store coal for the use of another portion of the animate world. May we commend the following passage, written by an observer of undoubted trustworthiness, to our author's attention?

"Suddenly the silence was again disturbed by the sound of the trampling and rushing of the oxen, as, mad with fear, they crashed through the underwood towards the open ground on our right . . . . Before they had run one hundred yards, the lions had got hold of one (presumably the hindmost), and the bellowings echoed and re-echoed from hill to hill across the narrow valley. I would that that distinguished naturalist, Mr. A. R. Wallace, could hear the piteous cries of an ox being slowly bitten to death by lions, or of a donkey being vivisected by hyenas. Such cries are terrible to listen to, and revealing, as they but too surely do, the frenzy of fear and agony of a dying brute, are a powerful appeal against the cold cruelty of Nature's inexorable laws."[2]

We come now to the question whether the adaptive character of organic arrangements compels us to regard them as the outcome of purpose properly so called, *i.e.*, of conscious purpose. But, we submit, it

[1] See *e.g.*, *op. cit.*, pp. 147–149, 185, 193.

[2] F. C. Selous' *Travels and Adventures in South East Africa*, p. 413.

is quite beside the question to prove at great length that there really *is* adaptation. In *The Reign of Law*, for example, the Duke of Argyll devotes a whole chapter to showing that the structure of flying birds is adapted to the end of flight; and seems to think he has advanced his case by so doing. He really appears to forget that the theory of Natural Selection, which bears the brunt of his animosity, takes its stand on the existence of adaptations, and is essentially an attempt to account for their origin as adaptations. That theory, in truth, deepens and amplifies the otherwise vague conception of the interest of the organism—which conception is the very soul of the idea of organic adaptation.

The Duke of Argyll's misrepresentations of his opponents are doubtless due to imperfect comprehension of their views, but misrepresentations they certainly are. It is quite in keeping with his usual methods that he should assert,[1] ostensibly *against the Darwinian*, that organs are made, not *by* use but *for* use. Now it is hardly too much to say that this, whether with regard to the history of the race or the normal development of the individual, is precisely what the unfortunate Darwinian himself contends for. The fundamental difference between the Darwinian and his critic does not lie in any divergence of view as to the reality of adaptation. No, it lies in the fact that the Darwinian, broadly speaking, regards phylogenetic change as *too intimately* connected with functional use to have preceded it in point of time; or, what comes to the same thing, regards the normal development of structural features as too intimately connected with the total economy of the individual to have been spread out, prior to the attainment of a useful level, over countless generations. That is why he does not need to assume that *individual variation* is not variation, *i.e.*, that it is specifically determined along lines of utility. It is sufficient for the Darwinian that, among the countless neutral or hurtful variations, there should be some which are useful. The racial fixation of these last, supposing them to become fixed, he ascribes, partly to the presence of favoring circumstances, but primarily to the fact that they *are* useful. And the fixation (*i.e.*, normalization) of a variation is the beginning of a new species.

All the *à priori* objections which are brought forward in *The Philosophy of Belief*, against Darwinism and by way of proving that adaptation must be intentional, fall naturally under one of two heads: (1) that adaptation involves the relation of means and end, *i.e.*, that adapta-

[1] Cf. his article, in the *Nineteenth Century* for April, 1897, entitled "Mr. Herbert Spencer and Lord Salisbury on Evolution," p. 569.

tion is adaptation; (2) that in describing organic structures, etc., we cannot avoid using the language of purpose. To the first of these two arguments we have already accorded all the attention it deserves. We pass, therefore, to a consideration of the second, which forms the main topic of the first three chapters of *The Philosophy of Belief*.

We admit that adaptation partakes of the nature of purpose, just so far as it involves the relation of means and end; and to this extent we are clearly justified in using the language of purpose. The dominant feature in fact of the Darwinian position is simply this: that we must distinguish between purpose merely as adaptation, and purpose *properly so called*, which involves foresight and conscious choice. Such being the true nature of our position, it is plain that the second of the two arguments above mentioned is reduced to the level of the first. To argue that adaptation indicates mental purpose because it involves the relation of means and end, which is all that these *a priori* arguments, at their best, ever amount to, is to beg the whole question. Whosoever, then, would fain satisfy himself whether Darwin has made out his case, must study the writings of that author as they stand, and must not content himself with contemplating a list of words used therein. Unfortunately, the former of these two methods entails much greater mental labor than the latter.

In fairness, however, to the Duke of Argyll, we must reproduce his general statement of the new method—if that method can be called new, which is simply the most familiar of fallacies indued with the dignity of a logical canon—he proposes for elucidating the dark ways of nature: "Language . . . . . is the automatic expression of, and the witness to, that which we do really see—all the more to be trusted because of the fact that it is an unconscious witness. It is like the photographic surfaces, which are now made so wonderfully sensitive that, when turned to the sky, they become impressed with the images of stars and of other heavenly bodies which escape altogether from the grasp of conscious vision. So it is with words. It is vain to dispute their self-recording testimony. They cannot report anything which does not really shine in upon the self-consciousness of man, or, in other words, which he does not really see."[1]

Linguistic research—in which, by the way, we are as liable to error as in any other form of investigation—throws light on what men have thought, but it cannot tell us whether they have thought aright. In illustration whereof I will content myself with pointing out that our author's principle logically compels him to reject the Copernican theory,

[1] *The Philosophy of Belief*, p. 18.

because we talk of sunrise and sunset. Observe, however, the treatment he himself metes out to the "self-recording testimony" of words, when it happens to point in what he considers the wrong direction: "It is nothing but a most careless blunder if we allow ourselves to be deceived by the distant, dim, and partial analogies at which the speech-making instinct in man has clutched in order to bridge over the chasms of thought which yawn between the phenomena of matter and of mind. What we—for want of a better image—call the motives which act upon our wills, and between which they must decide, have, in themselves, the quality of good and evil as judged by knowledge and by conscience. A motive power in mechanics can never be either good or bad."[1]

But supposing that after all natural selection turns out to be nothing but a will-of-the-wisp, what does our author's argument gain thereby? We have seen that in accordance with the view which regards mind as having any influence at all on the course of physical events, the distinctive character of purposive action lies in the fact that it cannot be scientifically understood without taking into consideration the facts of consciousness. But the assumption of what we may call hyper-physical influence on the course of physical events is, as we shall see presently, scientifically serviceable only because we can identify the conscious agent with a particular organism, and thus indicate the physical conditions of that hyper-physical influence. If, then, the structure of organisms is due to mind *in the same sense as that in which human contrivances are due to mind*, it is the organism itself which has intentionally produced its own structure—unless, indeed, it has been artificially fashioned by some other organism. Thus for Darwinism we shall simply have substituted a riotous version of Lamarckism.

If, on the other hand, we say, with the Duke of Argyll, that the mind herein concerned is universal and so has not any special physical abode, we thereby destroy all analogy between the works of that mind and human action. And, in a psychological regard, the formation of design is indissolubly bound up with the relation in which the individual stands to the physical world at large. More precisely, it is of the very essence of human purpose that, on the one hand, we form as to our body a part of the physical world, while, on the other hand, it is only over our own body that we have any direct control. For a plan—whether it be actually carried out or not, makes no difference to what we have here to urge—that should take no account of the means necessary to the attainment of the end in view,

[1] *Op. cit.*, pp. 482, 483.

could hardly be called a plan; and it is only by bodily intervention that we effect any change in our material environment, or any deflection of the ordinary course of nature. From which it also follows that volition involves an antithesis between what *shall* be, and what but for our interference *would* be. In fine, purpose, as we know it, is essentially *contemplated bodily action;* and rational volition is purpose made active. Hence the absence of analogy between the operative methods of the transcendental mind and the possibilities of action open to the 'mere artificer,' entails also a complete absence of analogy between the alleged activity of that mind and human volition. In other words, the assumption of a contriving mind without any special local habitation, as a means of explaining the facts of organic nature, is for physical science simply a way of relegating the phenomena to the region of the miraculous; while for psychology it is an absurdity. The connection between organism and purpose is indeed most intimate; but it is purpose (proper) that implies organism, and not *vice versa*.

The need, therefore, for a distinction between adaptation, simply as such, and purpose properly so called—whether the theory of natural selection be accepted or not—really forces itself upon us as soon as we begin to reflect on the nature of purpose. The theory of natural selection, however, drives home the necessity of the distinction; while by impressing a dynamic, in place of a relatively static, form on the fact of adaptation, it elucidates the *relation* between the two terms of the distinction. Both organic adaptation and purposive action fundamentally represent an adjustment—the former in respect of the type, the latter in respect of the individual—to the fluctuating conditions of existence.

To conclude: the chief defects that have revealed themselves in the theory of a universal purpose, as expounded in *The Philosophy of Belief*, are: (1) that the theory misses the point of Darwinism; (2) that, in place of Darwinism, it has nothing to offer us but a miraculous agency; (3) that, whether taken in its full extent or in its special application to organic nature, it is at bottom unmeaning.

HOWARD V. KNOX.

PRIMARY EMOTIONS.

BY the term 'primary emotions' we mean those simple elementary emotions into which all emotions may be analyzed, just as all shades of color may be considered as due to the combination of certain primary colors, or all material substances as due to the combination of

certain chemical elements. Now does psychological analysis, like physical or chemical analysis, reveal such elementary emotions? For instance, may we find with Mr. Irons in his recent paper in this REVIEW that introspective analysis shows that the primary emotions, which blend to make all others, are "satisfaction, dissatisfaction, anger, fear, ill-feeling, kindly feeling, repugnance, scorn, admiration"? I do not think that we find any single example clearly and fully demonstrating that certain emotions are real combinations of others, are new and distinct modes resulting from the union of different elements. Two gases, oxygen and hydrogen, will combine to produce a peculiar substance, water; but will, say anger and fear, combine to make a new emotion? We know that anger and fear often co-exist, that a man on some provocation will exhibit mingled fear and rage, but do we ever find more than this mixed state, that is, a new psychosis into which fear and anger disappear in combination? I confess that, so far as I can analyze, I find no real compound psychoses, but only complex aggregates; and though new and late emotions are conditioned by early ones, I have yet to see it clearly shown that there is any real combination of certain so-called 'primary' emotions to form others which may be termed 'secondary.' The physical terms 'blending' and 'fusing,' which are so much used by some, seem to be quite inapplicable to the emotional growth, to which metaphors of organism should be applied; but, in truth, we need no metaphor of any kind, only a direct unbiased study of mental facts.

For illustration we may take the æsthetic psychosis which Mr. Irons and others claim to be not a distinct emotion, but a combination or blending of others, or a variety of others. Æsthetic pleasures may, indeed, be taken in the indulgence of any emotion. Even fear, as with Alphonse Daudet, may be enjoyed as a pleasurably æsthetic experience. Many people find a certain measure of fear quite enjoyable, but it may be as a mere relief from *ennui*, or it may be direct pleasurability of function, rather than æsthetic feeling. But when we feel æsthetic pleasure in fear, we feel it as a beautiful feeling, just as we feel pity æsthetically in witnessing a tragedy. This merely means that the æsthetic emotion may find its stimulus and object in a purely mental state like fear or other emotion, as well as in material outward things, as tree, flower, or bird. The æsthetic feeling is a peculiar pleasure in the free and ideal development of experience, and the experience, which is basal to it, which it feeds on, does not explain it, and much less *is* it. Æsthetic psychosis is thus distinct from the direct pleasure which flows from successful experience in the struggle for existence,

and which, however much it be cultivated and revivified for its own intrinsic pleasurability, still ever remains brutal and unæsthetic in its selfish subjectivity. Such is the pleasure of eating, which, however cultivated, is never in itself fine art, but merely gross sensation. And so the direct anger-pleasure, the fierce throbbing pleasure which the angry man feels in discharging his wrath, is obviously unæsthetic, for the man himself, no matter whether the anger occur in the direct competition of existence, or be merely indulged for its own sake, as often happens with irascible men. The ship-captain venting his wrath upon a sailor has a direct but very unæsthetic pleasure, though the spectacle may be very æsthetic to the observer.

But turning to the other meaning of 'primary' as denoting the first or earliest emotions, can we come to any such classification as Mr. Irons proposes, namely, that "satisfaction, dissatisfaction, anger, fear, ill-feeling, kindly-feeling, repugnance, scorn, admiration," are the six primary modes of emotion? While we take it that Mr. Irons uses 'primary' mainly in the first sense discussed, yet his treatment implies also the second, and it will probably be granted by all that elementary emotions are also primitive. Now the very first emotion was probably fear, and anger was a close second. The evidence for this I have pointed out with some fullness in my *Evolutionary Psychology of Feeling*. However, the simplest and most primitive emotional life is perhaps a fear-desire, as representing the two fundamental reactions toward the two most significant elements in environment, namely, the hurtful and beneficial. Prescience arises with practical simultaneity to both bad and good—the bad, enemy *e. g.*, being feared; the good, food *e.g.*, being desired. The organism perceiving what will hurt, is afraid, and gets out of the way; and perceiving what will do it good, desires and moves to its possession: this appears to me the most primitive stage of emotional life. As demanded by the conditions of the struggle of existence there comes here at first, as in all biological adaptation, only a single crude reaction for all modes of the bad and good, and only gradually does the organism learn to distinguish kinds of good and bad, and to react in ever closer adaptation appropriately to each. And I think the earliest signs of emotion in infancy and the latest in senility, confirm this general evolutionary deduction. The great mass of observations of children by Preyer, Perez, and others, lead toward this conclusion. And in old age common observation notes that desire and fear are the latest emotions to fail and disappear. And, in the same way, the offensive emotion or anger may be considered a close third to the defensive or fear and the possessive or desire in natural evolution.

It is certainly evident that many of the emotions adduced by Mr. Irons are far from primitive. For instance, do we find any evidence in young infants of such emotions as repugnance, admiration, or kindness? An infant may repel unwelcome food as distasteful, or with anger or fear, generally showing all these, but hardly shows real repugnance as emotion. The infant takes a direct sensuous pleasure in many things, but without emotion either of admiration, kindness, or joy. Low psychisms show no emotions of joy, gratitude, or satisfaction. An infant is merely sated with his dinner, but the man may also be satisfied; the infant has only the gross sensation, the man has this and the reflective emotion as well.

But it may be said that joy always comes with all gratification of desire. Is there not always an emotional pleasure in attainment and possession, apart from and before the direct sense-pleasure of assimilation? Do not all creatures who can desire take ideal satisfaction, *i. e.* joy, in the ideal as realized? Do not all beings who pursue have emotional pleasure in nearing and attaining the object of pursuit? But while it may be granted that this joy is tolerably early, yet it may not extend to primitive desire, which is only a step from its object, and plunges at once into direct realization of pleasure, is sated without satisfaction. This seems the case with an infant in its earliest desires for food; it grasps and conveys to its mouth, but shows only the pleasure of direct sense, though it soon learns to take pleasure, as real emotion of joy, in attainment for its own sake. Primitive desire, being but one remove from its objects, springs thereon at once, and emotionless fills itself with direct sense-pleasure. But ideal pleasure soon arises, and all that delicate graduating of emotion into the gradual attaining, which makes for refinement and perfection of adaptation.

Surprise is another emotion which seems to many to be very early; yet I am inclined to think that what we often take to be surprise in young infants and in low organisms, is nothing more than nervous shock. Further, surprise implies a certain theoretical construction which is broken in upon, and such construction is obviously rather late. Instinct is merely balked by the unusual, and low mentality accepts everything in a matter-of-fact way. It would not surprise a savage, child, or animal to see the sun rise in the west. On the other hand, it must be said that since prescience—the basis of all emotion—means from the first expectancy, expectancy thwarted must mean from the first surprise. The animal which expects food and finds a stone, is surprised. Surprise is here secondary to desire, but still may rightly be called primitive. And the function of surprise as leading

to a correct and new expectancy would seem to be early required in experience, which is of a mere hit-and-miss kind, and often entirely fails.

Further, we must note that expectancy which results according to our own measure of the good, ends in the emotion of content or satisfaction—passive joy. If the good is far greater than expectation, there is agreeable surprise; if far less, disagreeable surprise. Now the agreeability is plainly a joy, the disagreeability a grief. Hence, are not surprise, joy, and grief necessarily implied in all prescience and expectation, and so primitive and primary emotions? However, though this seems a simple deduction I am inclined to think that 'measure' is not primitive, but measure of good and bad are early evolutions from a primitive state which marks no distinction of quantity, but is only a bare apprehension of hurtful or of beneficial, and so either fears or desires, and thus incites the simplest adaptive actions, avoidance and grasping. And when good turns out bad or *vice versa*, there may be a meagre but primitive surprise. But this sort of surprise with very early psychisms, as with young infants, is quite apt to bring fear, anger, or desire, rather than real joy and grief, which imply a certain deliberation and reflection foreign to the first stages of mental life.

We conclude, therefore, that the emotions first demanded in the struggle of existence would be fear, anger, and desire, and so far as investigation goes there is much evidence to support the view that these emotions are absolutely primitive. And it may be that psychism consists emotionally only of these for some little time. However this may be, surprise, joy, and grief enter quite early. Again, the struggle for existence as bringing in quite early both gregariousness and differentiation of sex implies an early motive power in emotions of personal attachment or affection, and special kinds of desire.

HIRAM M. STANLEY.

LAKE FOREST, ILL.

PRIMARY EMOTIONS.

MR. STANLEY seems to have entirely misunderstood my position. He charges me with maintaining that there are certain elementary emotions which, by a species of chemical fusion, give rise to all the others. Further, on the ground that states which are elementary in this sense are necessarily primitive, he supposes me to assert that such emotions as admiration and repugnance are present at the earliest stages of mental development.

Now I have explicitly rejected the notion that there is any quasi-chemical process in the sphere of mind. A very definite expression of opinion on this point can be found in the first article on "The Nature of Emotion."[1] Again, at the outset of the discussion on the primary emotions, I rule out the supposition that a blending can be so thorough that the component parts are not discernible in the total impression. This surely implies that complex states are to be dealt with, not chemical combinations, for no one could maintain that chemical elements appear in the resulting product with the character they possess in isolation. Moreover, the general method of treatment throughout the third article ought to make the writer's position sufficiently plain. One of the purposes of the discussion is to show that, given certain primary emotions, all other states truly emotional may be explained as complexes constituted by various primary emotions, or by one, or more than one, of these emotions in conjunction with other mental elements. All emotional states which are not regarded as primary emotions are explicitly asserted to be complexes variously constituted.[2] Like Mr. Stanley, I find "no real compound psychoses, but only complex aggregates." Sometimes the elements entering into a complex are so closely associated that the nature of the constituent parts tends to lose in distinctness, and a species of blurred total impression results. In such circumstances it is legitimate to speak of 'blending.' Close attention, however, will enable us to discern the elements in the pseudo-totality, and this implies that we are dealing with complex aggregates, not with chemical products.

Since I do not hold that primary emotions are elementary in a chemical sense, I cannot be accused of asserting that admiration and similar emotions are present at the beginning of conscious existence. I carefully refrained from discussing any ultimate genetic questions, and my inquiry was confessedly limited to an introspective examination of the adult consciousness.

DAVID IRONS.

[1] PHIL. REV., VI, 3, p. 248.

[2] Cf. PHIL. REV., VI, 6, pp. 631–2, 633, 642.

REVIEWS OF BOOKS.

Ethics: An Investigation of the Facts and Laws of the Moral Life. By WILHELM WUNDT. Vol. I, The Facts of the Moral Life, translated by JULIA GULLIVER and EDWARD BRADFORD TITCHENER; Vol. II, Ethical Systems, translated by MARGARET FLOY WASHBURN. London, Swan Sonnenschein & Co.; New York, The Macmillan Co., 1897.—pp., xii, 339; viii, 196.

One by one the works of Professor Wundt are becoming a part of English philosophical literature. To the *Human and Animal Psychology* and the *Outlines of Psychology*, we may now add the first two of the four parts of the *Ethik*. It is to be hoped that this is but an earnest of what is to come, that the writings of the great Leipsic psychologist may exercise the same wide and direct influence upon English and American thought that they have enjoyed in the land of their birth. Professor Wundt is fortunate in the translators which his works find. These two volumes will at once take rank among the best translations of which our philosophical literature can boast. A careful examination has brought to light no error of any importance, while the list of 'Germanisms' is so short that it would be hypercriticism to refer to any of them. The publishers have done their work well, also, and produced two very attractive books.

The *Ethik* attracted so much attention upon its appearance in Germany twelve years ago, and, moreover, has been so exhaustively discussed, that its contents may be assumed to be more or less familiar to the majority of the readers of this REVIEW. However, the history of psychology during the past twenty-five years should have taught us that the most important problems of the various philosophical disciplines at present are those of method. In view of the author's relation to the reform of psychology we may, therefore, profitably examine the work before us from the point of view of the principles it recommends and employs in the study of the moral life.

The Introduction, with its three sections upon "Ethics as a Science of Norms," "The Methods of Ethics," and "The Problems of Ethics," at once awakens the highest hopes. Indeed no abler presentation of the methods of our would-be science has been made in this generation. The fact that ethics deals with values often causes confusion as to its aims, but we are reminded that "the estimate of the value of facts is also itself a fact, and a fact that must not be overlooked when it is

there to see" (Vol. I, p. 5). Here then are certain phenomena which demand description and explanation, a requirement which can only be met by an examination of the facts themselves. The methods of speculative idealism and of empirical subjective psychology are alike unsound in principle and harmful in practice. "There is no ethical system of the speculative persuasion which does not lay stress upon some true and important fact of ethical experience; but it can be said also that there is no such system which does not exclude a multitude of other facts just as true, and, in part at least, just as important, and which is not, for that reason, inadequate as a system to many aspects of the moral life" (*Ibid*, p. 13). The same criticism may be urged upon the second of the above-mentioned methods. In each case, "instead of directing our attention so far as possible impartially to all parts of experience [we] turn to some single fact, which, for one reason or another, lies right in our line of vision" (p. 13). The objective method, on the other hand, will base its conclusions upon an exhaustive examination of all the phenomena of the moral life itself, wherever they are accessible.

But when we turn from a study of this enlightened programme, we are reminded only too painfully that it is easier to preach than to practice. Professor Wundt's doctrine, it may be remembered, is that morality is definable as the service of the general will, a will which, indeed, is nothing over and above the individuals which make up the race, for it consists of all those active tendencies which such individuals have in common. On the other hand, it is something other than the sum of these wills, and though it possesses no personality of its own, it is none the less the most real of realities. The evidence offered for this view of morality is supplied by an answer to the question: What are the ends which in our judgment are universally recognized as moral? (Part III, p. 426). The ends of human activity may be divided into three classes, individual, social, and humanistic. In the first case the object pursued is either pleasure or self-perfection. Now actions undertaken in obedience to the former motive are regarded as morally worthless. Perfection, on the other hand, cannot be an end in itself, for its sole value is as a means to the attainment of additional pleasure either for self or another. Hence our author concludes that actions performed for the realization of any strictly personal ends are in themselves ethically worthless. But, if this be admitted, we are forced to the same conclusion with regard to all conduct prompted by the idea of the happiness or the perfection of other persons. "If morality does not permit me to look upon myself as

an end, it is impossible to see why it should allow me to look upon another self as such. The life and welfare of a given individual and the development of his powers are in themselves of the same value, whether I happen to be the individual in question or not. . . . Even an increase in the number of persons can scarcely be said to make any difference. The summation of zeros can never give us anything but zeros" (*Ibid*, p. 428). Hence as the result of this method of exclusion we seem forced to conclude that nothing except the *general* welfare and *general* progress can serve as the goal of moral endeavor. But since this cannot mean the welfare of persons, for the reason stated above, it must be the welfare of humanity as such, as realized in the possession by humanity of the intellectual and spiritual products of individual activity. But since this is the end towards which the general will is directed, morality is resolvable into the service of the general will.

Perhaps some will meet this deduction with scoffs at the pretensions of the new divinity, others may find it explained by Emerson's characterization of the age: "A whole company of ladies and gentlemen out in search of a religion." For such an attitude the author is quite prepared. The vast majority pass through life without insight into the nature of the ends for which they work and suffer. Apart from the imperatives of law and custom, the sense of obligation comes to most people in the form of an immediate and permanent satisfaction promised to those who do what society agrees to call right. What reason have they to bother themselves about the why? Hence, a failure to recognize in this theory a statement of the source of one's own moral enthusiasm would not be admitted to be a valid argument against its truth. As a matter of fact, the existence of such a devotion to the general will cannot be doubted, for all of us have seen a parallel phenomenon—a man who, at odds with every member of his family, sacrifices the best part of his life for what he considers to be the family welfare. The Fatherland may be such an object of devotion also; if so, why not the general will? Certainly if this be denied, many of the statements of this book become absolutely inexplicable. But it is one thing to admit that we have here a genuine expression of a personal ideal; it is another to assert that we have an adequate account of the moral life as such. The work before us, with its exhortations to use the objective method, pretends to be something more than the 'confessions of a German scientist.' If so, we are entitled to demand a fair amount of evidence for every assertion made. Let us then take the statement that the pursuit of individual ends is in itself morally

worthless. Where, we may ask, is the evidence that this is a universal, or even a frequently observable, moral judgment? What are we to make of the facts apparently inconsistent with this view, or does the author know of none such? On what grounds does he deny the possibility of taking perfection of character as an end in itself, or has he never heard of a seemingly self-evident dictum that was annihilated by the concrete realities of experience? And when we read that actions directed towards the welfare of others are in themselves of no moral value, is this too supposed to be a deliverance of the universal moral consciousness, or is it merely what this consciousness ought in consistency to hold? And if the latter is meant, as seems to be the case, why does he not seriously attempt to show that the explanation proposed for the popular judgment upon devotion to others is really tenable as a complete solution of the problem, in the face of the difficulties that seem to stand in its way? To these questions no answer is forthcoming. We must take the author's *ipse dixit* for any assertions he may choose to make, or at best content ourselves with a reference to some obvious phenomenon which could be explained in terms of almost any ethical theory that has ever been proposed. Let it be clear that the amount of truth and error in the theory itself is not here in question. What we wish to point out is the manner in which it is built up. As it here stands, it is mere autobiography, extremely interesting and indeed valuable as a contribution to the study of contemporary moral ideals, but with no more claim to the title of science than Amiel's *Journal intime;* and this regardless of the possibility of a future demonstration in the hands of another person.

But perhaps it will be supposed that the desired evidence is to be found in what is the first volume of the present translation, bearing, as it does, the title "The facts of the Moral Life." But such an expectation will be disappointed. The subject-matter here is exclusively the evolution of the moral life from custom to law and morality. This process is traced in the history of language, of myth, and of custom itself, the methods and alleged results of the comparative anthropologists being entirely rejected, as readers of the *Logik* would anticipate. All of this is interesting, much is valuable, and some of it convincing; but it leads to no conclusion which could not be adopted with equal facility by any school that does not postulate an absolutely unchanging moral code. Of the second volume the same may be said. In a space about three-fifths of that which Sidgwick allows himself for his history of ethics, all the theories of ancient, mediæval, and modern moralists, down to those of our own gener-

ation, are marshalled for review, 'all,' that is, with such exceptions as Butler, the Scotch Intuitionalists, and Green. That under these circumstances the treatment is "compressed," is hardly surprising. More serious is the fact that a number of the criticisms rest upon misunderstandings (page 76, line 1; page 187, line 5); others depend upon the assumption that what an author neglected to explain, his theory, either as he left it or with slight modifications, is incapable of explaining (page 70, line 32; page 137, line 21); others again are hardly more than statements that the views in question are not in harmony with those of the historian (page 185, line 28; page 129, line 21). As a supplement to Sidgwick, this volume will make a place for itself; but its criticisms are too subjective to make it a contribution to the solution of the great problems of ethics.

A review which confines itself to a discussion of the treatment of fundamental problems must necessarily do injustice to a work such as this, whose defects in certain directions are atoned for by great merits in other respects. The exposition is all that could be desired; it is clear, precise, and logically articulated. Furthermore the haze which permeates many works on ethics is entirely absent—to our great satisfaction and the glory of the general will. For that treacherous atmosphere may be made to cover as many sins as charity—indolence, an attempt to stand in two places at once, and even downright dishonesty. Moreover, the book is never dull and never fails to be suggestive; and, especially in Part I, it presents a great deal of valuable material. These two volumes are well worth the labor their translation must have cost. We may not accept the laws of psychical evolution which lie at the foundation of much they contain. We may be disposed to look upon the "law of the three stages" and the "law of heterogony" in very much the same light in which Professor Wundt himself looks upon the generalizations of Buckle. But no one can read this account of the development of the moral life, and the history of systematic reflection upon that life, without carrying away ideas and facts in abundance to incorporate into the structure of his own thought.

FRANK CHAPMAN SHARP.

L'evolution des idées générales. Par TH. RIBOT, professeur au Collège de France; directeur de la *Revue Philosophique.* Paris, Félix Alcan, 1897.—pp. 260.

We have here, according to the preface, the first of a series of volumes which will "comprehend all the parts of psychology" and will, it is to be inferred, treat the various functions of mental life from the

genetic standpoint, tracing their development from simpler to more complex forms. The increasing interest of psychologists in this aspect of their science is illustrated by the recent success of Professor Baldwin's books; and the present volume by Professor Ribot is an assurance of his admirable fitness to make genetic psychology attractive to students. The book is clear, systematic, and interesting throughout.

The author distinguishes three stages in the process of forming abstract ideas. The first is that of the 'generic image,' which is unaccompanied by a word, and is found in the thought-life of the lower animals and of very young children. This generic image is the result of a simple, almost passive assimilation of like perceptions. Reasoning at this stage, the "logic of images," as M. Ribot calls it, is of two kinds: (1) an inference from particular to particular, a mere association of ideas "plus the state of expectation;" (2) inference by analogy, which involves a somewhat higher degree of abstraction. The logic of images is characterized by its practical aim and by the fact that no symbolic substitution for the image is possible.

In the second stage of development the general idea consists of a representative schema accompanied by a word. The representative schema differs from the generic image in being less simple, in basing itself on perceptions which are less frequently repeated and have less obvious resemblances, and in being attached to a word. This stage of abstraction is exemplified in many savage languages and numerical systems, which are entirely dependent on concrete representations or perceptions. Progress in the power of abstraction is marked by the increasing importance of the word, the general term attached to the general idea, until finally the third stage is reached, where the word is the all important thing, and the image or schema sinks completely into the background.

Here the question arises whether thought is ever possible in terms of words alone, or whether the word is always something more than *flatus vocis*. Touching this point, M. Ribot gives a summary of the results of certain experiments which he described in part before the Congress of Experimental Psychology in 1892. The experiments consisted in repeating to various reagents a series of words varying in abstractness from the degree represented by the word 'dog' to that represented by the word 'infinity.' The subjects were asked to describe the first conscious content suggested by each word. After classifying the results into three general types, concrete (when the visual image of a particular object was suggested), typographic-visual (when the printed or written word was seen), and audi-

tory (when the word was merely heard), M. Ribot discusses the cases where, according to the subject, nothing at all was suggested by the word. He concludes that even here the word is more than a mere sound; it differs from a word in a foreign language, for example, in being accompanied by a subconscious or potential memory of the meaning of the word. M. Ribot seems not to have studied any cases of the actual occurrence of his "representative schema," *i. e.*, cases where the visual image was not that of a particular object, but was schematic in character. Yet these must have been of frequent occurrence in the case of the less abstract words, *e. g.*, 'animal,' 'dog.' With the more abstract words, such as 'canine,' 'law,' 'infinite,' it would, according to M. Ribot's own theory be lacking, and one wonders that he did not make these experiments illustrate his distinction between concepts of the second and third degree of abstraction.

The remainder of the book is occupied with an illustrative study of the development of certain concepts. The concept of number, for instance, is traced from its origin in the perceived difference between continuity (unity) and discontinuity (plurality) to its more abstract mathematical forms; that of space is shown to have originated in the perception of concrete finite extensions, and to have gradually developed the high degree of abstractness which we find in the conceptions of non-Euclidean geometers. The development of the concepts of time, law, cause, and species is discussed in a similar manner. Perhaps the most interesting section, as indicating M. Ribot's philosophic tendencies, is that on the concept of cause. The origin of the idea of causality is held to lie in man's experience of his own activity as a creative agent. Later he ascribes a similar activity to the forces of nature. The next stage consists in regarding causality as a relation, an invariable sequence of antecedent and consequent. This final stage in the evolution of the abstract idea of cause comes when we consider cause and effect as two aspects of the same phenomenon. Now in the course of this development has the older notion of cause as a force, a creative power, quite disappeared? No, answers M. Ribot, although it has no place in the *concept* of cause, it is still a fact of inner experience, and the part it may yet play in certain sciences is "the secret of the future."

In his concluding chapter, the author explains the growth of the power of abstraction by the law of natural selection; distinguishes three directions, practical, speculative, and scientific, which conceptual thought has successively followed; and ends by emphasizing again the fact that when dealing with the higher orders of concepts

the activity of the mind is largely sub-conscious, all that appears in clear consciousness being the words which are used as symbols.

MARGARET FLOY WASHBURN.

The Conception of God. A Philosophical Discussion concerning the Nature of the Divine Idea as a Demonstrable Reality. By JOSIAH ROYCE, Professor of the History of Philosophy in Harvard University, JOSEPH LE CONTE and G. H. HOWISON, Professors in the University of California, and SIDNEY EDWARD MEZES, Professor of Philosophy in the University of Texas. New York, The Macmillan Company; London, Macmillan & Co., 1897.—pp. xxxviii, 354.

Although this discussion was noticed on its first appearance in pamphlet form (PHIL. REV., V, p. 213), its present republication calls for some further remark. The first part of the volume preserves the form as well as the substance of the original discussion, including Professor Royce's address on "The Conception of God" and critical papers, by Professors Mezes, Le Conte and Howison, respectively, on "Worth and Goodness as Marks of the Absolute," "God and connected Problems, in the light of Evolution," and "The City of God, and the true God as its Head." To these essays there is now added a "Supplementary Essay" by Professor Royce, on "The Absolute and the Individual," in which he seeks to develop his idealistic principle in such a way as to demonstrate its inclusion of the moral individual, and thus to save his philosophy from the main criticism of Professor Howison, as well as from the objections offered by the other contributors to the symposium.

Professor Royce's original paper proceeds on essentially the same lines as those followed in his earlier work, *The Religious Aspect of Philosophy*, the chief variation being that, in describing the life of the Absolute, he here follows Mr. Bradley's example, and substitutes the term 'experience' for 'knowledge.' In fact, the essay is hardly more than a restatement, in brief and telling phrase, of Mr. Bradley's argument in *Appearance and Reality*. Like that argument, and like Professor Royce's own earlier statement, it moves on intellectual rather than on ethical lines, and invites criticism from the ethical point of view.

This criticism the argument received in unmistakable and effective terms from Professor Howison, who, as editor of this volume, has the advantage of the last word, and uses it to state the main issue in the following way. The question is, whether Professor Royce's conception of God "is compatible with that autonomy of moral action which

mankind in its fully enlightened civilization, and especially under the Christian consciousness, has come to appreciate as the vital principle of all personality" (p. xi). "Here," Professor Howison maintains, "there is a chasm, incapable of closure, between the immanence of God, even as Professor Royce conceives it, and the real personality, the moral autonomy, of created minds." Professor Royce, in rejoinder, contends that there is no such chasm, that a divine Self-Consciousness continuously inclusive of our consciousness is demanded if a knowable God is to be proved, and that its existence is not only compatible with the existence of included conscious selves, but "directly provides for them, imparts to them as its own members its own freedom, and thus gives them all the autonomy permissible in a world that is moral" (p. xii). In his Supplementary Essay Professor Royce seeks, by "a systematic investigation of the nature and source of Individuation," to show how personality, conceived as self-conscious individuality, flows directly and even solely from his conception of God, when the essential implications of this are developed. Here Professor Howison's contention is that this theory of the person, making the single self nothing but at an *identical part* of the unifying Divine Will (as Professor Royce is explicit in declaring), gives to the created soul no freedom at all of its own; that the moral individual, the person, cannot with truth be thus confounded with the logical singular; and that personality, as reached by this doctrine, is so truncated as to cease being true personality (p. xiii).

Otherwise stated, the issue is the well-known one between monism and pluralism. "Only it is of essential importance to add that both parties interpret their views in terms of idealism. To both alike, all reality at last comes back to the reality of Mind; to the primary reality of self-consciousness, and the derivative reality of 'things,' or objects ordinarily so called, as real items in such self-consciousness. The difference is, as to whether there really are many minds, or, in the last resort, there is only one Mind; whether the Absolute Reality is a system of self-active beings forming a Unity, or is after all, with whatever included variety, a continuous Unit; whether it is a free Harmony, or, as Professor James satirically calls it, a 'solid block'" (pp. xiv, xv). The one view might be called idealistic monism, the other pluralistic or ethical idealism. Professor Howison prefers to describe the latter view as 'personal idealism,' since "all other forms of idealism are," as he thinks, "in the last analysis non-personal—are unable to achieve the reality of any genuine Person" (p. xv).

The fault of idealistic monism, in the eyes of Professor Howison,

is, that it is not absolute idealism at all: "its exact fault is not waiting for thought to take the fruitful round of its entire Ideal before declaring its equivalence to the Real" (p. 89). Its advocates "have not seized nor expressed the complete *Ideal of the Reason.*" It is the expression of oriental pantheism, rather than of western theism. If we would reach the theistic position, there must be "no confusion of the creature with the Creator, nor any interfusion of the Creator with the creature. Above all, we must attain to the *moral* reality of the creature, which means his self-determining freedom of not merely with reference to the world of sense, but also with reference to the Creator, and must therefore include his imperishable existence" (p. 98). The 'self-completeness' of God, reached by Professor Royce, is incompatible with goodness. "Such self-completeness fails to provide for any manifold of selves either phenomenal or noumenal, and the very meaning of goodness, if goodness is moral, depends on the reality of such a public of selves" (p. 105). The fault of Professor Royce's conception of God "at the bar of the religious reason is, that by force of the argument leading to it all the turmoil and all the contradictions and tragic discords belonging to experience must be taken up directly into the life of the Absolute; they are *his* experience as well as ours, and must be left in him at once both dissolved and undissolved, unharmonized as well as harmonized, stilled and yet raging, atoned for and yet all unatoned. Contradiction is thus not only introduced into the very being of the Eternal, and left there, but its dialectic back-and-forth throb is made the very quickening heart of that being" (p. 123). This contradiction is inevitable "unless the logical consciousness reaches up to embrace the religious, and learns to state the absolute Is in terms of the absolute Ought" (p. 124). Such an ethical interpretation of Reality is indeed required to fill "the gap still remaining in the logic of science;" the real primacy of the moral reason means that "the reality of the scientific thinker as a moral being becomes the supreme condition and the demonstrating basis of science and of Nature itself, the world of the Vision Beatific becomes the one inclusive, all-grounding Fact, and a real God amid his realm of real Persons becomes the absolute reality" (pp. 126–127).

In his Supplementary Essay Professor Royce seeks "reconciliation rather than refutation," holding that "an argument concerning the grade of reality possessed by ethical individuals has its place in the development of an idealistic philosophy." "I shall try to show, not that Professor Howison is wrong in the stress which he lays upon the ethical importance of his individuals, but that the Absolute, as I

have ventured to define the conception, has room for ethical individuality without detriment to its true unity, or to the argument that I have advanced for its reality" (p. 137). The essay is a highly interesting, thoroughly fresh, and, in the present condition of the problem, not unimportant restatement of the idealistic position. It is divided into five parts, of which the first is little more than an introductory recapitulation of the earlier argument, and the fifth contains replies to the criticisms of the other symposiasts. In the other parts "the conception of will, and its relation to the Absolute," the "principle of individuation," and "the self-conscious individual" are in turn discussed.

The conception of God as the All-Knower is so far, Professor Royce admits, an extremely abstract conception. "One has every right to ask: Has the Absolute no other character than this? Does the Absolute only know? Or does he also will? Is our Absolute a purely theoretical being? Or does perfect knowledge imply more than mere knowledge?" (p. 185). Volition is attention, and attention is "sacrifice of ideal possibilities for the sake of realizing ideas. It is losing to win—losing bare abstractions to find concrete life. But the concrete life found is a life full of contrasting individuals, of sharply differentiated facts, of discrete realities. To the Absolute Experience, then, we should attribute just such a generalized form of the process that in us appears, clouded by countless psychological accidents, as the process of attention; just such an individuation of its contents, just such an attentive precision, whereby its universal types get discrete expression" (p. 201). "So, then, an Absolute Experience could and would at once find its ideas adequately fulfilled in concrete fact, and also find this fulfilment as an individual collection of individuals exemplifying these ideas, while, as to other abstractly possible fulfilments of the same ideas, the Absolute Experience would find them as hypothetical or ideal entities, contrary to fact" (p. 200).

Having thus found that "will individuates," Professor Royce proceeds to show that "individuation implies will," in the sense just explained. The antinomy of individuality seems complete. Individuality means uniqueness. "Thought, as such, cannot define uniqueness, and must appeal to experience; experience, as such, cannot present uniqueness, but must leave that, as being either an intelligible type or nothing, to thought" (p. 248). But the indefinableness of the individual, so far from proving its unreality, provides the clue to its nature as essentially ethical. "Man individuates the objects of his knowledge

because he is an ethical being. God individuates the objects of His own world, and knows them, for no other reason. . . . The Principle of Individuation, in us as in reality, is identical with the principle that has sometimes been called Will, and sometimes Love. Our human love is a good name for what first individuates for us our universe of known objects. We have good reason for saying that it is the Divine Love which individuates the real world wherein the Divine Omniscience is fulfilled" (p. 259). "It is not the object as presented, nor the object as thought, but it is the object as loved, which is such that there can be no other object consciously recognized as a fit representative of this type. . . . . This practical, this passionate, this loving, this at first thoughtless dogma of love, 'There shall be no other,' is, I insist, the basis of what later becomes the individuating principle for knowledge" (p. 262). It is also the individuating principle of existence. Love, whether in man or in God, is essentially exclusive, and the Divine love implies the existence of a single world, and no other, as its object; it says, 'There shall be but this one world.' The conclusion is that "objects are individuals in so far as they are unique expressions of essentially exclusive ideals, ends, Divine decrees"—expressions, in short, of the Divine Will.

There is no conflict, according to Professor Royce, between the individuality of God, "the only ultimately and absolutely whole individual," and "the included variety, the relative freedom, the relative separateness, of the finite moral individuals, who, in their own grade of reality, are as independent of one another, in their freedom of choice, but also as dependent upon one another, in the interlinked contents of their lives, as the moral order requires. They are not, like the Absolute, whole individuals. . . . But the freedom of each finite moral individual is part of the Divine freedom—not an absolutely separate part, but a part having its own relative freedom—a differentiated element of this freedom itself. The uniqueness of each moral individual is a *part* of that which renders the Divine life, in its wholeness, unique. The self-consciousness of each finite individual is a portion of the Divine Self-Consciousness. The One Will of the Absolute is a One that is essentially and organically composed of Many. These many forms of will harmonize with the Whole, just by being, in a relative measure, free in respect one of another" (pp. 273–274).

After all the ingenuity and promise of the argument, this seems a disappointing result. Professor Howison could hardly have asked for a more perfect statement of his ethical objection to Professor Royce's monism than is contained in these sentences. One fails to see

in Professor Royce's final result any real advance upon the position of T. H. Green. Will is, after all, only 'appearance' in man, its 'reality' is the Will of God. Yet, according to Professor Royce, "a world of individuals more separate than this, more endowed with absolute caprice than this, would be a world of anarchy, no 'City of God,' but a moral hell" (p. 275).

Thus we find the two chief contributors to this philosophical symposium each occupying, at the end of it, the same position which he took at the beginning. Readers of the present discussion will await with much interest the appearance of the work in which Professor Howison promises to deal with the questions here stated "in their proper setting, in the system of philosophy to which they belong . . . the complete Idealism which maintains the mutually transcendent and still thoroughly knowable reality of God and souls," and in which "the true and continuously significant autonomy of Conscience is to be shown, as the really integrating factor in the theoretical consciousness itself" (pp. xxxiv.–xxxvi.).

JAMES SETH.

SUMMARIES OF ARTICLES.

[ABBREVIATIONS.—*Am. J. Ps.* = *American Journal of Psychology*; *Ar. f. G. Ph.* = *Archiv für Geschichte der Philosophie*; *Int. J. E.* = *International Journal of Ethics*; *Phil. Stud.* = *Philosophische Studien*; *Rev. Ph.* = *Revue Philosophique*; *R. I. d. Fil.* = *Rivista Italiana di Filosofia*; *V. f. w. Ph.* = *Vierteljahrschrift für wissenschaftliche Philosophie*; *Z. f. Ph.* = *Zeitschrift für Philosophie und philosophische Kritik*; *Z. f. Ps. u. Phys. d. Sinn.* = *Zeitschrift für Psychologie una Physiologie der Sinnesorgane*; *Phil. Jahr.* = *Philosophisches Jahrbuch*; *Rev. de Mtt.* = *Revue de Métaphysique et de Morale*; *Ar. f. sys. Ph.* = *Archiv für systematische Philosophie*.—Other titles are self-explanatory.]

PSYCHOLOGICAL.

The Danger from Experimental Psychology. HUGO MÜNSTERBERG. Atlantic Monthly. February, 1898, pp. 159–167.

This article is a protest against the view that the new method of psychology renders possible the measurement of mental facts. No one has ever measured a psychical fact, and no one ever will. A recent book on psychology claims that the new psychology is quantitative. From cover to cover this book consists of measurements, and its sections are therefore brought under the headings of those conceptions upon which every measurement depends, namely, space, time, and energy. But, instead of giving the space of thought, it gives the thought of space; the energy of our feelings is not measured, but our feelings of energy and effort are described; the time of the objects of our thought is substituted for the time of our thoughts. The errors of this book are not without precedent in the history of psychology. Herbart and Fechner tried to introduce numerical measurements and mathematical methods. But while both systems had great influence on the progress of psychology, the mathematical element in each has been rejected as erroneous. The logical error of Herbart and Fechner was not exactly the same as that which modern tendencies exhibit. They did not substitute physical objects for psychical facts, but they gave to the psychical facts some features which belong in reality to physical objects only. In conclusion, Münsterberg maintains that the psychologist who discovers a measurable sensation or feeling stands on the same level with the physicist who discovers a metal which is not in space and time and subject to the law of causality. He indicates briefly the philosophical arguments in favor of this position.

DAVID IRONS.

A Contribution towards an Improvement in Psychological Method (1). W. MCDOUGALL. Mind, No. 25, pp. 15–33.

The writer states his purpose in this essay to be two-fold: (1) to point

out that current methods of psychological description are still imperfect despite marked improvements; (2) to attempt a clearer statement of the relation between neurosis and psychosis. This paper (Part I) deals with the former point. The writer proceeds to discuss the methods of some of the leading psychologists, and to show that these methods involve obscurities and inconsistencies. Three difficulties in particular are noted: (1) that which arises out of the adherence to the old definition of mental processes as necessarily consisting in some kind of affection of consciousness excluding those factors which do not directly affect consciousness; (2) the fact that an action, once apparently the result of conscious process, comes to be performed unconsciously; (3) the fact that simple reflex processes form the first members of a graded series proceeding up to the most completely conscious actions. The writer discusses briefly the views of Ward, James, and Stout. Ward ignores the neural processes, describing mind in terms of conscious processes only; James and Stout admit unconscious mental factors, but have no accurate conception of the part these play. The doctrine of the simple concomitance of consciousness, on the contrary, is the result of a too exclusive attention to nerves and nerve-processes. The writer then goes on to discuss the relation between neurosis and psychosis. All the leading psychologists have accepted the dictum that some neurosis underlies all psychosis, and that the latter is in some way dependent upon and determined by the former. They make little serious attempt to define the relation accurately. The prevalent usage among psychologists is to speak of neurosis and psychosis as two aspects of the same thing or process. Others set the problem aside as insoluble, but of little importance.

VIDA F. MOORE.

La perception de la ressemblance. P. MALAPERT. Rev. Ph., XXIII, 1, pp. 51–75.

To clear the way for his own theory of the perception of resemblance the writer begins by criticising other theories. He deals first with the theory of Plato, that resemblance is apprehended by an act of pure thought, that it is an object of conception, not of intuition, and bears no sensitive or representative character. He then discusses the theory maintained by Bain and Spencer that perception of resemblance is an immediate datum of consciousness, and yet not an absolutely fundamental and irreducible process. It is, according to them, reducible to the perception of difference. By a careful analysis of the details of Spencer's theory, Malapert shows that it is self-contradictory, and that in the end it is the perception of difference which is derived from the perception of resemblance. Fouillée's theory is found to approximate more closely to the truth, holding, as it does, that perception of resemblance is not only an immediate consciousness, but an irreducible fact. In working out this theory, however, Fouillée seems to waver between two positions: (1) that the perception of

resemblance has to deal with the continuation of a state of well-being, and (2) that it has to do with the superposition of a sensation upon the memory image of a former sensation. The truth that Fouillée has grasped is that the perception of resemblance requires the presence of a persisting or continuing subjective element in the midst of change, but he is wrong in making this element a pleasant affective state. The true theory, according to Malapert, is that this element of identity is found in attention; it is the intellectual adaptation, the fixation of the mind, the feeling of effort or mental tension which is found in every state of consciousness, but which does not confound itself with such states. It is by virtue of this effort in reacting to all impressions from without that the 'I' conserves itself, affirms its own identity, and recognizes itself in the indefinite multiplicity of its operations.

STELLA E. SHARP.

Das Wesen der Aufmerksamkeit und der geistigen Sammlung. KARL UEBERHORST. Ar. f. sys. Ph., IV, 1, pp. 65–77.

Attention is defined by this writer as "that intellectual function which is directed to the correct apprehending, in one or the other of its moments or in its entirety, of the given content of a perception or thought." Though sometimes seemingly involuntary, attention is always called forth by an act of will. The exposition of the nature of attention is rendered difficult, chiefly because attention is not clearly distinguished from *geistige Sammlung*, which is "a condition of the complete merging, for the time being, of a person's intellectual functions into the accomplishing of a single task." This distinction must be made because *geistige Sammlung* includes, besides attentiveness, also five other states or attitudes of mind: (1) the taking heed whether an intended act of the self is commensurate with the result that it is to produce in the spiritual or physical world; (2) recollection of the forgotten content of a former representation; (3) reflection on the solution of a problem of cognition or of practical life; (4) absorption in producing a work of the imagination; (5) the attitude of religious devotion. An act of will is always necessary. Absentmindedness, the opposite of *geistige Sammlung*, does not mean an indifference of the mind to all its representations, but a distraction from its proposed object. Attention proper seems to attain its end by comparing and distinguishing its object in relation to associated representations. It does not intensify an external impression from within, for it would then fail to realize its purpose. Such intensifying, whenever it occurs, is due to the vivid feelings connected with expectation, and is a sort of hallucination.

BOYD BODE.

Influence de la vie émotionelle sur le cœur, la respiration, et la circulation capillaire. A. BINET et J. COURTIER. L'année psychologique, III, pp. 65–126.

This study first gives an account of experiments on various subjects, children and adults. The states investigated were surprise, fear, physical pain, 'sensations and emotions' of pleasure, and various psychical emotions voluntarily aroused by the subject. The result of this part of the inquiry was that all the emotions, *irrespective of their quality*, stimulate the nervous system; they provoke vasomotor constriction, and accelerate respiration and the movements of the heart. One is somewhat reluctant to come to this conclusion, the authors add, for one is tempted to attribute *a priori* the greatest importance to the quality of the emotion. The second part of the article deals with experiments made upon a special subject whose nervous system was not easily excited. The results here go to show that the capillary circulation bears a relation to the quality of the emotion. The experiments made on a third subject to ascertain the physiological influence of music, regarded as an excitant of emotion, led to the conclusion that the intensity of the emotions plays a much more important part than their quality. The general conclusions which the authors reach, in view of all their experiments, are as follows: (1) In the majority of individuals every emotion produces a vaso-motor constriction, an acceleration of the movement of the heart and of respiration, and these effects are the more marked the stronger the emotion is; (2) in a very few cases a sensation of pain and an emotion of sadness produced a slight weakening of the movement of the heart; (3) it is possible, as the observation of one subject has shown, that the capillary pulse changes with the quality of the emotion, and this fact renders possible a classification of the emotions according to their effects on the capillary pulse.

DAVID IRONS.

L'abstraction des émotions. TH. RIBOT. L'année psychologique, III, pp. 1–9.

The author maintains that there is a process of abstraction in the affective as well as in the intellectual life. We find a familiar example of abstraction in the sphere of emotion when we visit a foreign country. A general feeling is aroused which is an extract or *résumé* of the mass of particular affective impressions which we have experienced. We express this, in somewhat vague terms, by saying that we feel the 'soul' of the country in question. Emotional abstraction never goes beyond the first stage of abstraction, the stage of generic images or 'recepts.' This general doctrine is a natural consequence and complement of the theory that there is a true affective memory. The emotions leave traces which can be revived as memories, and these particular memories can fuse into a unique state of consciousness. Affective memory by its very nature is a first step towards abstraction, for the affective, like the sensory, image is not a complete reproduction and contains simply the outstanding features of the original experience.

DAVID IRONS.

ETHICAL.

Les facteurs des caractères nationaux. ALFRED FOUILLÉE. Rev. Ph., XXIII, 1, pp. 1–29.

National character is not the simple sum of individual characters. The nation, as a socially determined group, has a different though not separable existence from that of individuals; and the national character expresses the particular combination of psychical forces of which the national life is the outward expression. The national character is not always best expressed by the crowd or even by the majority, but by a natural *élite* which, better than all the rest, represents the soul of the entire people. The conception of nationality is not purely physiological and ethnological, nor purely economic. It manifests itself chiefly in psychological signs: language, religion, poetry, monuments, etc. Three main causes work for the maintenance of the constitution and temperament as well as of the psychical character of a people, viz: (1) heredity, (2) adaptation to the physical conditions, (3) adaptation to the social conditions. There is a general law of progress that "according as a people approach the modern type the action of the social conditions comes to outweigh that of the physical; furthermore, the physical factors tend to transform themselves into social factors." The former alone are not sufficient to account for the evolution of national character. Evolution is not a mere struggle of races, the outcome of which is determined by the more or less favorable physical environment of each, neither is it wholly explained by the Darwinian law of social selection, which considers only the elimination of individuals, families, or races ill-adapted to the actual environment. Certain sentiments and ideas have a superior force owing to their intrinsic or relative truth, and it is by the possession of these that progress is determined. Again, economics cannot be reduced to a struggle of classes conditioned by the possession of property. To assert this is again to leave out the human element. The physical and psychological nature of man, united to the action of the environment, is the cause of the struggle of classes and not merely its result. By understanding the general laws of nature and of the mind, one can understand to a certain extent the differences of national character, but the exceptional—whether in the guise of character, as a human genius, or under the form of physical discovery—is incalcuable and unpredicable. Sociology can, therefore, never attain to the exactitude of a mathematical science. Yet the sociological historian should never lose sight of such laws as we know; he ought not only to describe but to explain life.

STELLA E. SHARP.

Deterrent Punishment. W. A. WALL. Int. J. E., VIII, 2, pp. 157–168.

This article treats of the nature of legal punishment. The spirit of modern times has obviously passed beyond a merely vindictive principle of punishment, and the reformation theory is rather moral than

legal or political. On the other hand, to deter from crime is of the utmost political importance. At any rate the deterrent end appeals very strongly to common sense. This conception of punishment may be united with the idea of social justice if we conceive the criminal deliberately placing himself in conditions which by the movement of society—the same society which guarantees him liberty—necessarily result in his punishment. We can then conceive of his act as returning upon himself, and thus explicitly satisfy the demand for justice. But the deterrent theory is being strenuously attacked; prevention in the scientific sense is swallowing it up. Prevention is said to be primary, repression secondary, and in a wide and general sense this may be admitted. But it must be recognized that repression is a social necessity, and a social necessity can never be called unimportant.

L. R. ROGERS.

The Bearing of the Doctrine of Selection upon the Social Problem. W. M. DANIELS. Int. J. E., VIII, 2, pp. 203–214.

The merciless struggle for mere existence is to some extent changed in human society, and the residual competitive process is altered so as generally to become a struggle for domination instead of a struggle for life. The area of competition is also narrowed so as no longer to cover the family circle. Within the family the weakest are protected by the sacrifices of the other members. If, then, it be true that the selective struggle within industrial society is only a prolonged and peaceable version of the cruder struggle for existence in the animal world, what bearing will this fact have upon the social problem—the demand for the betterment of the condition of the lower classes? In the first place it precludes all anticipation that material want and suffering will disappear from society. But, on the other hand, the persistence of the selective process in society sanctions no fatalistic attitude toward social betterment. The most practical aspect of the law of selection is its bearing on concrete projects of social reform. It furnishes us a vantage ground from which we may often view, in true perspective, social issues which taken by themselves are involved in obscurity and doubt. This does not imply that survival in the struggle for existence is regarded as the final norm for conduct. It simply means that selection through struggle is a quantity we cannot expect to eliminate, and that, therefore, we must judge of social duty and conduct with reference to the actual stage on which mankind must act its part.

L. R. ROGERS.

The Ethical Basis of Collectivism. L. T. HOBHOUSE. Int. J. E., VIII, 2, pp. 137–156.

The socialistic creed, like other creeds, has been subject to the law of evolution. Socialism in its primitive form appeared as a development of Rousseau's principle of equality, and received its most scientific exposition

in the Marxian doctrine of surplus value. According to this doctrine, the surplus value of the laborer's industry over the 'subsistence minimum,' is wrongfully appropriated by the capitalist and the landlord. While it is easy to criticise this theory, yet Marx here lays down a certain ideal of abstract justice which contains elements essential to a true and complete doctrine. Equality is not the sole aim of society. The true end of Socialism is ethical, the use of the state for ethical or human ends. In the struggle for existence our fellow-men are at once our most formidable enemies and most potent allies. But, as in the animal world, so in the social, the higher the organism the greater the interdependence of its parts. Competition is the law of the unorganized, coöperation of organized life. Progress in evolution, the evolution of higher types, is identical with the advance of organization. The natural organ of such organization is the moral intelligence, by virtue of which the individual makes the good of the species the object of supreme interest. This conception of life is as old as the ethical consciousness of man. In primitive society, however, coöperation is limited to the family, tribe, city, or nation. Moral progress has consisted primarily in what Green calls "the extension of the area of the common good." The goal will have been reached when all the world becomes as one family. To sum up: the tendency of modern collectivism is to absorb the abstract ideals of earlier political systems into a comprehensive and distinctly ethical system, based on the substitution of peace and good-will for the principle of rivalry and war. It aims to qualify the methods of competition by the social spirit realized in the more intimate personal relations. In so doing it reveals itself as a phase of a wider evolutionary process, whereby in the higher races a purposive and intelligent organization of life, inclusive of the whole species, is gradually substituted for the war of all against all by which the survival of types is determined at a lower stage.

VIDA F. MOORE.

HISTORICAL.

Melanchthon als Philosoph. HEINRICH MAIER. Ar. f. G. Ph., IV, 1, pp. 73–132; IV, 2, pp. 212–245.

Melanchthon's text-books cover the whole field of philosophy: dialectic, physics and astronomy, metaphysics and natural theology, anthropology, ethics. He is an Eclectic, and he culls what he conceives to be the truth out of all the systems of the ancients as well as the scholastics. Sometimes the influence of Aristotle and the ancients predominates; at other times, the influence of scholasticism; and, again, the new Humanistic movement sways his thought. In these two articles, which conclude the series, the writer makes a minute investigation of the sources, the different tendencies, and the various elements of Melanchthon's philosophy.

ALBERT LEFEVRE.

Kant's Doctrine of Time and Space. JAMES H. HYSLOP. Mind, No. 25, pp. 71–84.

The author cites certain passages from the *Critique*, which, he thinks, may indicate that Kant believed in the existence of objective correlates of our pure intuitions of space and time. In several of these passages, Kant speaks of *Raum an sich* or *Zeit an sich*. The *an sich* may be used, possibly, to indicate the *a priori* nature of space and time; but Kant has spoken so often of their *a priori* nature that its use for this purpose seems pleonastic. Moreover, if we explain *an sich* thus in the passages under consideration, doubt is thrown upon its meaning in the phrase *Ding an sich*. The "unequivocal interpretation" of the term will lead to fewer difficulties than the opposite procedure. If we adopt this unequivocal interpretation, we may explain such phrases as *Raum an sich* either as indicating a belief in an objective correlate of our intuition of space or as a survival from Kant's pre-critical thought. The author evidently inclines toward the former explanation, but does not wish to commit himself to it definitely.

ELLEN BLISS TALBOT.

Hegel's Treatment of the Categories of the Subjective Notion (II). J. ELLIS MCTAGGART. Mind, No. 23, pp. 342–358.

This is a continuation of a paper in *Mind* (No. 22, pp. 164–181) in which the judgment of Inherence was discussed and shown to lead logically to the judgment of Subsumption. In this article the author begins with the judgment of Subsumption in which the subject is more than a mere individual, and contains some degree of universality in that it does not stand alone, but is related to other individuals. This judgment is traced through its various stages from the particular judgment to the judgment of Necessity in which relativity is emphasized. In this judgment we are not interested in the extension, but in the intension, or the connection between the universals, which is shown by the form of the judgment. "Instead of saying, 'All lions are mammals,' we now say, 'The lion is a mammal.'" This relativity is still more explicit in the hypothetical and disjunctive judgments. The judgment of Necessity, which expresses a connection between universals is either ultimate or derived from an ultimate judgment of the same form. These ultimately valid judgments are laws of nature. This leads to an interesting discussion of scientific concepts, whether they have objective validity and are actual laws of nature, or are only formulæ and symbols, "mere creations of our mind." These laws, the author maintains, are of a categorical nature and are not only true but ultimate. Such a law connects one universal with another wider than itself, but does not deal with the whole field to which it refers. This field is organized by disjunctive laws into a systematic whole.

EDWIN P. ROBINS.

Hegel's Theory of the Political Organism. BERNARD BOSANQUET. Mind, No. 25, pp. 1–14.

This article examines some of the conclusions reached by Mr. McTaggart in his recent article in the *International Journal of Ethics*. The special points made are the following. (1) The chief element in Hegel's conception of an organism is self-sufficiency. This precludes its being either end or means in the strictest sense of the terms. "In society the end or obligation does not lie in the number or grouping of individuals, but in the manifestation of the will for which these are essential as externality." But this will, which is "self-end," is the *soul* of the state, while the grouping of individuals is merely its *body*. (2) If by 'society' we mean this manifestation of the self-conscious will, there is nothing in Hegel's metaphysical doctrines to prevent our regarding it as the end. (3) Philosophy cannot prescribe the details of social reform; our "immediate grounds of action" are empirical. But it can overcome narrowness and superstition; it can teach us "how to experience."

ELLEN BLISS TALBOT.

Ueber Ernst Mach's philosophische Ansichten. JULIUS BAUMANN. Ar. f. sys. Ph. IV, 1, pp. 44–64.

In this article the philosophical views of Mach are discussed, chiefly with reference to certain special points. According to Mach, science lives and grows through comparison and analogy. Theory is only indirect description. Causality denotes only a logical, not a physical necessity. Mathematics is chiefly occupied with constructions that contain only what it has itself put into them. Energy need not necessarily be apprehended as a substance. One might, perhaps, hold that an object perishes in one place and a like object comes into being in another. Bodies are only thought-symbols for groups of sensations. The ultimate reality is will; thought is, therefore, essentially an expression of organic life, and its consecutiveness constitutes personality. Science is simply the product of practical needs; it is economically ordered experience. In opposition to these views, the writer contends that scientific explanation establishes identities, and not merely comparisons or analogies. Dependence in cause and effect differs from dependence in geometrical propositions in that the former is not simply the product of the scientific imagination. Mathematics aims to make precise the abstractions derived from experience, thereby implying that this precision is not furnished by experience. That energy as a substantial basis is generally presupposed is a result of science, which starts with the recognition that nothing can pass into nothing or arise out of nothing. As to body, it does not follow that whatever goes beyond sensations as such and their succession or grouping in thought, is necessarily false. Mach's view of personality makes it sheer dogmatism to posit a world. Practical needs did, indeed, prepare for science, but the real value of science for practice was not evident until a late period. Mach's estimate of thought seems to imply a sort of absolute becoming—a view which science has never been willing to accept.

BOYD BODE.

Richard Avenarius and his General Theory of Knowledge, Empiriocriticism. F. CARSTANJEN (trans. H. BOSANQUET). Mind, No. 24, pp. 449–475.

This article is an exposition of Avenarius's *Kritik der reinen Erfahrung.* Since experience is a species of knowledge, this *Kritik* is also a theory of knowledge. Avenarius calls his theory 'empiriocriticism,' which means that experience is approached critically, and that all experience must be taken into account. This theory will start with no dogmas, but aims to be a critical description of experience; to begin with the soul or consciousness would prejudge the explanation. Every science, however, must begin with a presupposition which it cannot prove. The presupposition of empiriocriticism is that "every human individual accepts over against him an environment with manifold parts, other human interests making manifold statements, and what-is-stated in some way dependent on the environment." This Avenarius proceeds to analyze, and finds that it contains three members: (1) the environment, (2) fellow creatures and the self, (3) human statements (by which he means all that the individual does, says, and thinks). These statements are conditioned indirectly by the environment, and directly by the individuals, and especially by their central nervous organ. This is not materialism, for there is no attempt to mediate between the psychical and the physical, or reduce the former to the latter; as little is it idealism; it is only a critical way of describing what actually takes place. Avenarius finds two series of values, and that as one varies the other varies, or "where 'psychical values' are found these definite physiological states are also present, and differences in the physiological functions of organisms are accompanied by differences in the psychical values which are stated by the same individuals." Avenarius wishes to regard philosophy as a science, so he will not begin with the immediate certainty of the soul or consciousness as a principle of explanation, nor will he begin with the denial of the soul. He will begin without a soul, because at the present stage of the science, such an hypothesis as that of a soul is useless, and the facts are better classified as he has suggested. In respect to a theory of knowledge he shows that the difficulty of mediating between being and hought has been created; for subject and object have been artificially separated. His view is that the universe is one, and that the psychical and physical values are only different modes of viewing the same process.

EDWIN P. ROBINS.

NOTICES OF NEW BOOKS.

Die Wechselwirkung zwischen Leib und Seele. Eine Kritik der Theorie des psychophysischen Parallelismus. Von FRANZ ERHARDT, Privatdozent der Philosophie an der Universität Jena. Leipzig, O. R. Reisland, 1897. —pp. iv, 163.

This essay is a defence of the theory of interaction, as against that of psycho-physical parallelism. Its general position is as follows: Experience yields *prima facie* evidence of interaction; the resulting presumption cannot be overcome without showing that the real essence of soul and body is such as to preclude their interacting; but the theory of parallelism has never shown this, and, indeed, investigation at this point, that is, metaphysical and epistemological investigation, confirms the original impression of common sense as to the fact of interaction. The theory of parallelism offers five main objections to interaction between soul and body. The first is based on the unlikeness of the physical and the psychical series. The author replies that, if we decline to be metaphysical, we have no right to assume that the difference is really as great as it seems to be. To assume this metaphysical point is to beg the question. And, in any case, the difficulty of conceiving the interaction between soul and body is a general one attaching to all interaction, even that between two bodies. A second objection to interaction, is that the law of causation requires a physical cause for physical events and a psychical cause for psychical events. In denying this, the author insists that the law of causation requires *a* cause for every event, but specifies nothing as to the character of any cause. The next objection, which is the demand for a mechanical explanation for all motions, is met with the proposition that mechanics has nothing to say as to the qualitative character of moving forces. These may be attractions, affinities, organic forces, or a conscious will, as well as anything else. The law of inertia requires an external cause for motion, but an external cause is not the same as a corporeal cause. The third objection is based on the self-sufficiency of natural causes, the *geschlossene Naturkausalität*. This is convicted of a *petitio* in that it draws its conclusions from an arbitrarily assumed definition of 'nature.' The apparent interaction of soul and body is a part of nature and must be a determining factor in any adequate idea of natural causation.

Moreover, causes are never things of sense; the expression 'material causes,' or 'material forces,' has no definable meaning. The mechanics of cerebral phenomena, therefore, has nothing to do with the determination of the causes at work. The chief difficulty of all grows out of the law of the conservation of energy. After clearing up certain misconceptions, as, *e.g.*, that there is only one force transformed in various ways, or that all forms of energy must be conceived as motions, Erhardt insists that the sole

significance of the law is quantitative; it neither defines the forces of nature, nor the possible forms in which energy may be manifested. The possibility is open that some forms are intensive rather than extensive. Psychical states might thus be a true equivalent for lost physical energy, if any should be found to disappear. Another possible supposition is that invisible forces in general, whether physical, chemical, organic, or mental, constitute among themselves the real dynamic series, of which the visible mechanical phenomena are only means (should we not rather say, sensuous manifestations?). Whether any physical energy does disappear in the production of mental states, the author leaves undecided, but he is certain that action of the mind upon the body increases the store of physical energy. As though to fortify all possible positions, he claims that the law of conservation of energy is not a law of thought or a necessary presupposition for the investigation of nature, and that the application of it to organic processes has not yet been made out. A final and general refutation of the objections to interaction is presented in a brief criticism of the concept of matter, which leads to the conclusion that matter is force and nothing else. If, in addition, space be conceived in the Kantian fashion, every difficulty in the way of interaction vanishes.

This criticism of the theory of parallelism is supplemented by a number of positive considerations in favor of the common-sense view. Thus, the evident teleology of the sense-feelings in the maintenance of life requires the supposition that they stand in causal relations to the body. Again, were the identity-theory correct, the content of psychical states would faithfully reflect the physical states, which is not always, if it is ever, the fact. Nor has the identity-theory a place for the active states of consciousness, whether logical processes or volitions. Spinozism can admit no mental states except those which passively mirror the state of the body; it is impossible to conceive how comparing, discriminating, judging, etc., could have any physical correlate such as would be necessary were the theory correct. The alternative of admitting that the soul acts upon the body is some automaton-theory, and the purposive acts of the automaton would drive us to the theory of preëstablished harmony. Between interaction and preëstablished harmony there is no alternative. Finally, absurd consequences flow from the denial of interaction, as, for instance, that the poet's fancy has no power to communicate its wealth, that volitional endeavor is nonsensical, and that the content of a thought has no determining influence upon emotional expression.

The impressions made by this essay are complex. It contains not a little clear and incisive analysis, yet something is left to be desired in the way of sharply defined and steadily held positive points of view. There is no doubt that the author holds that the soul and the body interact, but he gives no critical exposition of the notion of interaction. Again, in the discussion of causes, forces, etc., there should be some discrimination between the scientific and the metaphysical standpoints. On the plane of the

former, hypothetical forces and things, as distinguished from phenomena, are hardly in place; while, if we once enter the region of metaphysical analysis, the naïve habit of assigning each class of phenomena to a special force ceases to satisfy. It may be questioned, also, whether the discussion of the law of the conservation of energy is altogether consistent with itself. If energy is not a substance, and the law of energy is quantitative only, we should naturally infer that the law would be satisfied by quantitative, in connection with qualitative, consistency in the succession of phenomena. The law would not require commensurability between the different forms of energy, but only that a definite amount of any antecedent (measured by its own proper unit) be followed by a definite amount of a particular consequent (measured by its own unit). In that case we should be rid of the notion of a fixed store of energy, all of which must be accounted for as a cashier accounts for his cash. If it should be found impossible to complete the round of changes and return to the starting point, this would trouble us no more than the general dissipation of energy in the physical universe. Yet the author takes pains to trace out the ramifications of this pseudo-substance, and speaks of its increase or decrease in various forms. Nevertheless, the essay is valuable both for its material and for its suggestiveness. Besides, it is timely. Like most reformations in their first stages, the new psychology has tended thus far to action rather than to depth of reflection. When it becomes self-conscious it will perceive that only a thorough-going epistemology and metaphysics can undertake to determine the relation of soul and body. The present essay contributes toward this result.

GEORGE A. COE.

Problèmes d'esthétique et de morale. Par C. R. C. HERCKENRATH. Paris, Alcan, 1897.—pp. 163.

The part of the book devoted to *Problèmes d'esthétique* contains discussions regarding the feeling of beauty, the feeling of sublimity, tragedy and comedy. The author dispenses with the customary introductory remarks, and in the opening sentences of the book states his problem to be to determine why one thing is judged beautiful, another ugly. He proceeds empirically, and from the confused mass of facts, from the great diversity of æsthetic judgments, derives the law that what we find beautiful is always that which is typical, and that the conception of the type is formed from observations of a group of individuals or objects of the same species (pp. 11, 19, 65). Another factor in determining the judgment of taste is the adaptation of an object to its use. The principle of efficiency is well illustrated by reference to the care of the skilled architect in adapting pillars to the apparent weight of the parts they support. The author then inquires into the origin of the charm of æsthetic contemplation. His conclusion is, that it arises from "the harmonious play of our mental powers." By this is meant that one recognizes something familiar in the object judged beautiful. The object must be comprehended, it must yield to understanding. "The

first condition in order to enjoy is to understand" (p. 30). Many great works of art are not readily appreciated because they are not understood. "Since, therefore, æsthetic appreciation depends upon knowledge, as it presupposes a work of separation and classification and incessant comparison with the ideal, which is only the type of the species, we may say that it is exclusively a function of intelligence. The pleasure which accompanies it is the pleasure resulting from every exercise of our faculties" (p. 32). The feeling of sublimity arises in the presence of grand or imposing objects, and also before powerful agencies (p. 67). The peculiar nature of tragedy lies in the fact that it arouses in us by turns agreeable and disagreeable emotions, and that the pleasure of the agreeable moments is enhanced by contrast with the moments of pain (p. 73). Comedy results from the sudden uniting of two aspects of a thing which are apparently incompatible.

The discussions of *Le problème morale* fall into three parts: (1) evolution of moral ideas, (2) moral feeling, (3) the relation of ethics to social science. With reference to the evolution of moral ideas, it is maintained that they are the product and result of social exigencies. "Moral ideas, notions of good and bad, are the result of the demands which society, for the sake of its preservation, imposes upon the individual" (pp. 103 ff.). Having shown that moral concepts arise from the experience of the society, the author attempts to discover what motives impel individuals to conform to the requirements of the social group. He finds that the individual conforms to the will of society through fear of punishment, through the influence of habit and the tendency to follow the suggestion of others. In further explanation of the origin of the motives of our actions, he holds that all benevolent sentiments are derived from the sentiment of love. But it is to be noted that love is entirely egoistic in its origin. "Love is the feeling of need which we have for another creature which completes our existence. All kinds of love are derivations from this" (p. 130). As love is the root of moral and benevolent dispositions, so hatred is the source of all that is anti-moral and malevolent. In the passion of hatred we find a relic of man's primitive nature when he had a severe struggle for existence. The last chapter of the second part of the book is devoted to a discussion of freedom and determinism, the nature and origin of the responsibility existing between society and the individual, and the nature of justice.

The book is clearly written, and abounds in illustrations and well-chosen quotations which bring into relief the author's standpoint. The work is dominated throughout by the philosophy and mode of thought which Mr. Spencer has made familiar to English readers.

D. R. MAJOR.

Ueber den Begriff der Erfahrung bei Helmholtz. Von VICTOR HEYFELDER. Berlin, Gaertner, 1897.—pp. 81.

In the monograph before us the author has packed an amount of skillful exposition and shrewd criticism that lends it no little interest. As an expo-

sition, it is perhaps as fair as one who had definitely taken sides against his author could succeed in making it. The critical treatment, while the Kant-Helmholtz controversy has made us familiar with many of the lines of argument followed, has the freshness of a serious effort.

The key-note of the author's thought may be quickly struck. Helmholtz stands for the view, usually called 'empirical,' that all knowledge is gradually acquired from the experience of the individual and of the race. Kant, representing a form of 'nativism' (although the term may lead to some misapprehensions) has claimed that no knowledge could be acquired by experience, nay, that there could be no experience from which knowledge might be acquired, were not the subject whose knowledge is in question provided with a certain nature (pp. 56, 57). The author holds that these two views are not really antagonistic. They appear antagonistic, because taken to be contradictory answers to the same question. Their opposition disappears when they are recognized as answers to quite different questions. Empiricism, rightly stated, is a theory or method of psychology. The doctrine with which it is supposed to clash is an answer to an epistemological question. Helmholtz confuses these two (pp. 10–12). Kant shows his appreciation of their difference by accepting the results of such a 'physiologist of the understanding' as Locke, and at the same time denying that any amount of study devoted to such 'physiology' could throw a ray of light upon his question as to how experience was possible (p. 57).

With this attitude in mind, Heyfelder divides his work into two parts, the first dealing with the psychological, the second with the epistemological problem of experience. In the first part he shows the inadequacy of empiricism, as Helmholtz has presented the doctrine, to the needs of a theory of knowledge. Helmholtz gives it the aspect of such a theory only by treating the 'psychological object,' at least in some of its aspects, as a thing-in-itself. It is a knowledge of the relations, at least, of a 'real' world made up of such 'things' that experience, and experience alone, is capable of affording us (pp. 7–9, ff., cf. *Thats. d. Wahrn.*, p. 13). Banish from our presentation of the problem such inadmissible entities, and the very statement of what is 'given' by experience involves, as a presupposition, just that ordering, or categorizing, of the given elements which empiricism tries to derive from experience as a consequence. For example, Heyfelder, with considerable skill in citation, shows that Helmholtz, in his attempt to construct the space concept out of non-spatial elements, clandestinely introduces in his presentation of such elements a rudimentary spatial relationship. The question of the nature of unity and manifoldness shows a like change of standpoint and a like dependence on presuppositions. Passing over an interesting section on causality which, with Helmholtz, plays a very questionable part in furnishing a basis for our inference of an external world, we may say that the first part of Heyfelder's little work leaves the problem at a stage in which the inadequacy of empiricism to a complete theory of knowledge is recognized, its proper field limited to psy-

chology, and the question left open as to how such a psychology is to be supplemented, if the questions raised by a theory of knowledge are to be answered.

Turning now to the second part of the monograph, the solution of the difficulties, left unremoved by an empiricism of the kind Helmholtz has defended, is found in a Kantian metaphysic. The questions at issue are here presented in a somewhat different form, that of the validity of judgments, rather than of their origin. The presumption is, however, that if certain judgments, of which the geometrical axioms are the type, possess a validity altogether different from that accorded to our so-called empirical generalizations, they must also possess a different nature and origin.

The battle is mostly fought in the field of geometry, that in which Helmholtz believed himself to be most sharply at variance with Kant. In accordance with the attitude maintained in the first part of his paper, the author here again advances the familiar contention that Helmholtz's polemic against Kant was objectless, and arises from a misunderstanding of what Kant meant by 'pure intuition' as furnishing a basis for mathematical judgments (p. 61). Helmholtz understood by intuition "a perception accompanied by characteristic sensation." Kant, on the contrary, understood 'pure intuition,' as opposed to experience, to mean "the recognition, not having its motive in experience, of certain uniformities which are not proved by physics, but are made the fundamental conditions of such a science" (p. 61). This position is such a favorite one among Kantians that it calls for a word of warning. Of course, it is true that Kant did not always mean by intuition an empirical perception of the kind Helmholtz seems to have in mind in the foregoing passage. On the other hand, this is not sufficient ground for supposing that Helmholtz failed to understand what there was intelligible in Kant's not always clear and consistent views on the subject of 'pure intuition.' For if he did not use the term in the sense that Kant did, it was because he held that one ought not to use it in that sense—certainly a sufficiently clear antagonism. The contention raised by the author and his fellow-Kantians, that Helmholtz was fighting against a man of straw, seems to the reviewer a most unsatisfactory way of approaching the problem. For really, whether he answered it rightly or not, Helmholtz raised the same question that Kant raised: Do mathematical axioms possess a different kind of certainty from that possessed by those laws of natural science which we usually call empirical generalizations? To this question the two thinkers gave directly opposite answers, apparently with full appreciation of the point at issue. It is fair to assume that, so far at least, neither was making a man of straw the target of his dialectical darts.

Our attitude toward the remainder of Heyfelder's argument does not, however, depend upon our view respecting his statement of the problem. He fairly joins issue with Helmholtz on the point that experience, in the sense of scientific observation and measurement, could furnish us any means of deciding against the Euclidean axioms of geometry. In the first

place the author admits, with Helmholtz, the "logical possibility" of other than Euclidean axioms, and claims for Kant the right, not only, with the modern metageometers, to ask whether such be conceivable, but to go further in raising the question as to the logical possibility of a non-spatial world (pp. 62, 77). The point is, however, that "from the logical possibility of constructing the concept and geometry of non-Euclidean space nothing can be deduced as to the validity of geometrical axioms" (p. 77). For it is the possibility of intuiting, not of conceiving, non-Euclidean space, that is desired. This distinction, however, between intuitive possibility (*Anschauungsmöglichkeit*) and logical possibility (*Denkmöglichkeit*) seems to be a source of obscurity rather than of light. If it mean nothing more than that it is impossible to picture (*vorstellen*) a non-Euclidean space, it is perhaps true that, at least so far as the higher dimensions are concerned, such an impossibility exists. That we could only picture such space "from the perspective of a three dimensional space" and that, therefore, "intuiting of it presupposes the Euclidean space" (p. 77) would not seem to be very significant. For not only might it be said of any experience which we have not had, that we view it "from the perspective" of experience which we have had; but also it is evident that the question of 'intuitive possibility' has resolved itself into a *quæstio facti* capable of being answered only by such an appeal to actual experience as Helmholtz suggests. The Kantian would seem at this point to out-Helmholtz Helmholtz in his confident appeal to brute fact.

The second argument that Heyfelder advances is better worth attention. It denies the relevancy of any observations on bodies filling space, in determining the nature of space itself. Suppose for the moment that the physical properties of bodies changed with their motion or with that of the observer, and that these physical changes could be measured. "We should yet be forced to look for the causes of these changes . . . in physical or chemical, not in spatial relations" (p. 71). "Physics would then have the task of establishing the law of these expansions and contractions; but the Euclidean axioms would not on that account lose their validity" (p. 78). Hence Helmholtz's 'physical geometry' is a geometry *plus* a physics; and while a certain latitude may be allowed a scientist in naming his study, it would always be possible to have a pure geometry, that is, one independent of physics, that would rest on Euclidean axioms.

It does not seem to the reviewer that this reasoning can be set aside with a word. For if it contain a fault, it is the paradoxical one of being too true for its own good. A concrete example may give a hint as to the ground upon which such an objection could be based. Such an example is furnished by the consideration of any system of one to one projection. Helmholtz suggests the reflection in a concave mirror. Let us, for the sake of simplicity, consider the projection of a plane in a circle of that plane. The processes taking place in both regions would be describable in exactly the same terms. If, however, we regard the circle as part of the plane, any

system of projections would not be congruent with the figures projected. There could then be any number of internally Euclidean spaces which, regarded as parts of a common space of any character, would not be congruent. It would then be possible, as our author claims, to separate the physics of any space from its geometry. The inhabitant of the circle could regard his world as belonging to the system from which the projections were made. His bodies would then change their dimensions as they moved, much as we see reflections undergo distortions in a convex mirror. The law of this change might be called a physical law. But if so, could there be any question of the truth or falsity of geometrical axioms assumed? Evidently the pure geometry of empty space would have neither truth nor error. The only question that could possibly arise would be: What geometrical postulates will allow us to describe our physical processes with the greatest simplicity and economy of thought? But this question can be answered only by an observation of what these physical processes are, so far as spatial terms enter into our description of them. Such a line of thought, imperfect as this brief presentation of it must be, would seem to lead us to the conclusion that, in so far as it is true that pure geometry can be separated from physics involving spatial terms, in so far the axioms of this pure geometry are perfectly indifferent. In so far as any question can arise as to the truth or falsity of axioms, it is a question of the most economical postulates, and the answer to such a question is an appeal to experience.

The space that the importance of the preceding argument has tempted us to devote to its consideration prevents reference to the remaining points raised by Heyfelder. Suffice it to say that they all seem to the reviewer to turn upon the question as to the sense in which a geometrical axiom can be proved. If, as Heyfelder claims with some show of justice, Helmholtz has failed in his attempt to point out the experiences that would be convincing, is it not still more true that Kant has failed to explain what truth would mean in a case where the possibility of error did not exist?

Taking an inclusive glance over the whole contest between empiricism and nativism, as presented by the author, it would seem that he has succeeded in pointing out serious difficulties attendant upon the acceptance of the former doctrine. Apart from the errors incidental to Helmholtz's mode of statement, depending, as it seems to do, upon realistic preconceptions, there remains for any method the difficulty of showing how experience is to begin. But whether this difficulty is removed by a Kantian doctrine of *a priori* forms of consciousness, or whether it is not merely restated, and that perhaps in less intelligible terms than the consistent empiricist has at his command, is a question which can scarcely be properly raised, still less answered, within the limits of the present review.

EDGAR A. SINGER, JR.

UNIVERSITY OF PENNSYLVANIA.

Introduction to Philosophy. By OSWALD KÜLPE, Professor of Philosophy in the University of Würzburg. Translated by W. B. PILLSBURY and E. B. TITCHENER, of the Sage School of Philosophy, Cornell University. New York, the Macmillan Co., 1897,—pp. x, 256.

Professor Külpe's *Einleitung* was noticed so recently in this REVIEW (Vol. V, pp. 181, *seq.*) that an extended review of the translation seems to be unnecessary. There can be no doubt that Professor Titchener and Dr. Pillsbury have performed a real service to American students by giving this book an English dress. On the whole the translation is very well done. Here and there one is arrested by sentences that savor too much of the translating process, and one is led to say that if the author had been writing in English he would not have expressed himself thus. But, taking into account the well-known difficulty of finding exact equivalents for the German technical terms, the reproduction of the original is both faithful and sufficiently flexible.

As to matter, teachers who are very familiar with the needs and difficulties of beginners might venture upon a few criticisms. To be frank, although this is the best book of the kind in English—excelling Robertson's *Elements of General Philosophy* in its objectivity—it is not yet the *ideal* work for beginners that we all await, and perhaps are destined to look for yet a long time. In my judgment this is the main consequence of the view regarding the purpose of an Introduction adopted by Professor Külpe: "to give the reader a bird's-eye view of the whole extent of philosophy, past and present" (p. 3). I incline to think that the truth is that two kinds of introduction are required: one for beginners and subordinated to the plan of telling "what is the nature of philosophy, *i. e.*, what is the aim of philosophical thinking," and designed to "point out the way in which one may oneself attain to philosophy" (p. 2); another to be used on the Külpe prescription as a species of tonic by students somewhat more advanced. The several Introductions now before the public are but relative successes, mainly because they either appeal to more advanced students only (*e. g.*, Paulsen, Külpe), or attempt to combine both aims (*e. g.*, Stuckenberg, Ladd). The present work is an advance on its predecessors in the clearness with which the author conceives precisely what he desires to accomplish.

As every one aware, Külpe's matter, and his manner for the greater part, call forth the highest praise. Beyond some few statements too big to be accurate if taken literally, as some amateurs have taken them, and beyond the defense of the belated dualistic standpoint in metaphysics—*ignotum per ignotius*—there is little to criticise. I should hope that the labor of the translators will find wide favor among those students who have already been grounded in the elements of the subject.

R. M. WENLEY.

UNIVERSITY OF MICHIGAN.

The Psychology of the Emotions. By TH. RIBOT, Professor of the College of France, Editor of the *Revue Philosophique*. The Contemporary Science Series. London, Walter Scott; New York, Charles Scribner's Sons, 1897.—pp. xix, 455.

This volume presents M. Ribot's work in a form easily accessible to English readers. The translation does not call for special remark, but it may be well to give some account of M. Ribot's general position. The book is divided into two parts. The first deals with the nature and conditions of pleasure-pain and emotion. The second deals with the special emotions. The simple emotions are here treated in detail, and an attempt is made to show how the complex emotions are derived from the primary forms. In this connection the moral and social feelings, the intellectual, æsthetic, and religious sentiments are discussed at length. The Introduction to Part I and the conclusion give the author's general standpoint.

M. Ribot's fundamental conception is that "the foundation of the affective life is appetite or its contrary, that is to say movement or arrest of movement; that it is at its root an impulse, a tendency, an act in the nascent or complete state, independent of intelligence, which has nothing to do with it and may not even be present" (p. 438). Will, regarded as tendency to act or impulse in general, is the basis of consciousness in every animal. "At the first moment desire is anterior to all experience, to every consideration of pleasure or pain; it acts as a blind force, it is a *vis a tergo*, a propulsion only explicable by the physical or mental organism. It must necessarily act at once without knowing whither it goes, else it would act too late or not at all. At the second moment it is guided by experience and rests on proved pleasure or pain, seeking the one and avoiding the other. Blind impulse, when it reaches its end, finds its satisfaction there, and seeks it anew because it is pleasant" (p. 442). All those who do not profess this 'physiological' theory are vaguely classed as 'intellectualists.' The intellectualist thesis is that states of feeling "are secondary or derived; the qualities, modes, or functions of knowledge; they only exist through it; they are confused intelligence." Against this view the author insists that "feelings are primitive and autonomous" (p. vi). This does not mean apparently that pleasure, pain, and emotion are irreducible facts. Indeed they are explicitly asserted to be the consequences of the satisfaction or arrest of impulse. By 'feeling' or 'sensibility' M. Ribot understands "the faculty of tending or desiring and *consequently* of experiencing pleasure or pain" (p. 2). Every feeling offers a double aspect—the external motor manifestation and the internal hedonic effect. As the latter proceeds from the former, the "primacy of feeling" means really the primacy of will.

This is in many respects an attractive position, but the author does not develop his point of view or add anything new to its defense. He speaks rather ambiguously, moreover, on the relation between emotion and impulse. At the outset he declares that he adopts without restriction the James-Lange

theory, and we frequently find the assertion that emotions are derived from needs and instincts (cf. pp. vii, 194). But, in criticising the James theory, M. Ribot tells us that it is wrong to speak of any causal relation between the motor manifestations and the psychical fact we call emotion. "The Aristotelian formula of matter and form seems to meet the case better, if we understand by 'matter' corporeal facts and by 'form' the corresponding psychical state" (p. 112). Generally speaking, emotion seems to give the author a good deal of trouble. It is a complex of different elements, and yet a state of consciousness *sui generis* (pp. 12, 15). Again, "while joy and grief present all the characters which constitute an emotion" they must not be classed with the emotions, for they are identical in nature with physical pleasure and pain, "and we should then have to class pleasure and pain among the primitive emotions" (pp. 15, 16). This seems to indicate that the distinction between pleasure-pain in general and emotion is rather obscure, and the author's conflicting statements on this point seem to bear out this conclusion (cf. pp. 12, 132, 197, 47, 133).

The book as a whole is clearly written and suggestive. The author has a keen eye for the difficulties of a position and raises difficulties that are frequently ignored. Nevertheless the reader will probably feel that there is a certain lack of precision and consistency throughout. This, however, is doubtless due in large measure to the fact that the psychology of feeling is at present in a transition state.

DAVID IRONS.

Zur Lehre vom Gemüth. Von JOHANNES REHMKE, Professor der Philosophie zu Greifswald. Berlin, R. Salinger, 1898.—pp. iv, 122.

In this compact and systematic treatise Professor Rehmke investigates the mental phenomena which are indicated in German by the term *Gemüth*. Whenever this word is used, feeling (*Gefühl*) is always implied, and the inquiry therefore begins with an examination of feeling. At the outset the author proves that feeling is not itself a concrete individual, and can only be conceived as the determination of a psychical individual, *i. e.*, a consciousness. Being a particular determination of an individual, it is necessarily found in conjunction with other particular determinations. It is always united with cognition, though in itself it is always simple. Pleasure and pain are never at the same time present in consciousness, and the feeling of the moment is never a compound of elementary feelings. These views spring from the erroneous opinion that 'sensations' are individual things, each of which has its special 'feeling-tone.' But cognitive states, like feelings, are not independent entities. They are determinations of the consciousness-individual. Moreover, each sensation does not have a special feeling-tone attached to it. Feeling is an expression of the unity of the self, and is always determined by the cognitive totality present at the moment.

Pleasure-pain exhibits no qualitative distinctions. Such states as fear,

anger, love, hate, etc., derive their specific character from the presence of certain bodily sensations. While 'feeling' in the narrow sense indicates simply a subjective state, mere pleasure-pain, in a wider sense the term implies a momentary unity of three elements, namely, pleasure-pain, the determining cognitive factor, and certain organic sensations. The third element may be held to be the direct result of the second, or the two in question may be regarded as both conditioned by one physiological state. In either case the necessary relation between them is recognized, and, as pleasure-pain is conditioned by one of them, it is evident that all three elements may form a unity. Every 'feeling' (in the wider sense of the term) has certain bodily consequences. These are called the 'expression,' and must be sharply distinguished from the physical element which is necessarily connected with the cognitive condition, and is a constituent of the complex 'feeling' itself. The James-Lange theory is, therefore, wrong in so far as it implies the assertion that the 'expression' is the cause of the emotion. On the other hand, it is equally erroneous to maintain that all the physical changes are the effects of the emotion. The true position is one that mediates between these two extremes.

Mood (*Stimmung*) is to be distinguished from the concrete 'feeling.' The constituent elements are the same in each, but the two cognitive factors hold different positions. The organic sensations which are 'concomitants' in the case of feeling, form the determining condition in the case of mood. What is known as *Affekt*, on the other hand, is not a special determination of consciousness distinct from feeling. It is characterized by the intensity of the pleasure-pain element and by the violence of the organic accompaniment.

Perhaps the most interesting part of this treatise is the discussion of the relation between pleasure-pain and emotion. Having denied the existence of qualitative distinctions within pleasure-pain, Professor Rehmke is forced to bring in organic sensations to account for the specific character which such states as anger and fear undoubtedly possess. The difficulties of this position have been pointed out by the critics of the James-Lange theory. These difficulties are all the greater when it is admitted that the bodily 'expression' in the narrow sense of the term is explicable only by means of the emotion. When the organic sensations connected with the outward actions thus indicated are eliminated, it is impossible to find specific organic sensations which are connected invariably with specific emotions. It is impossible, therefore, to account for the qualities of the different emotions by appealing to the sensations of physical change which accompany them. Professor Rehmke's work as a whole, however, may be cordially recommended to those who are interested in this branch of psychology. It is a vigorous, acute, and independent piece of work, and, despite its brevity, must be regarded as a noteworthy contribution to the literature of the subject.

DAVID IRONS.

The following books have also been received:

France. By J. E. C. BODLEY. Two volumes. New York, The Macmillan Co., 1898.—pp. xviii, 346, 504.

The Philosophy of the Humanities. By THOMAS FITZ-HUGH, Professor of Latin in the University of Texas. Chicago, The University of Chicago Press, 1897.—pp. 63.

Studies from the Yale Psychological Laboratory. Edited by EDWARD W. SCRIPTURE, Ph.D. Volume IV, 1897.—pp. 141.

Princeton Contributions to Psychology. Edited by J. M. BALDWIN. Vol. II, No. 2; Vol. II, No. 3. Princeton, The University Press, 1898.—pp. 98, 144.

Évolution individuelle et hérédité. Par F. LE DANTEC. Paris, Félix Alcan, 1898.—pp. 308.

La timidité. Par L. DUGAS. Paris, Félix Alcan, 1898.—pp. vii, 167.

Les croyances de demain. Par LUCIEN ARRÉAT. Paris, Félix Alcan, 1898.—pp. 176.

L'enseignement intégral. Par A. BERTRAND. Paris, Félix Alcan, 1898.—pp. 313.

Le rationnel. Études complémentaires à l'essai sur la certitude logique. Par G. MILHAUD. Paris, Félix Alcan, 1898.—pp. 179.

La philosophie de Nietzsche. Par HENRI LICHTENBERGER. Paris, Félix Alcan, 1898.—pp. 186.

Essai sur l'esthétique de Descartes. Par ÉMILE KRANTZ. Deuxieme édition. Paris, Félix Alcan, 1898.—pp. iv, 376.

Die Begriffe Phänomenon und Noumenon in ihrem Verhältniss zu einander bei Kant. Von GEORGE DAWES HICKS, Dr. Phil. Leipzig, W. Engelmann, 1897.—pp. 276.

Methodologische Beiträge zu psychophysischen Messungen. Von Dr. A. WRESCHNER. Leipzig, J. A. Barth, 1898.—pp. vi, 238.

Einfühlung und Association in der neueren Ästhetik. Von Dr. PAUL STERN. Hamburg und Leipzig, Leopold Voss, 1898.—pp. viii, 81.

Kant's Leben und Schriftstellerthätigkeit. Von EMIL ARNOLDT. Königsberg in Pr., F. Beyer, 1898.—pp. xx, 156.

Das Kantbildnis der Gräfin Karoline von Keyserling. Von Dr. E. FROMM. Hamburg und Leipzig, Leopold Voss, 1897.—pp. 16.

Ueber die Anlage und den Inhalt der transscendentalen Aesthetik in Kants Kritik der reinen Vernunft. Von Dr. G. DAXER, Hamburg und Leipzig, Leopold Voss, 1897.—pp. 95.

Kant's Rechtsphilosophie. Von Dr. A. ELEUTHEROPULOS. Leipzig, Otto Weber, 1898.—pp. 81.

NOTES.

Mr. Shadworth H. Hodgson has in the press a new work entitled *The Metaphysics of Experience.* It will be published by Longmans, Green & Co.

An anthropological expedition has left England for Torres Straits, Borneo. Messrs. Rivers, McDougall, and Myers, of Cambridge University, will accompany the expedition for the purpose of collecting psychological data.

Dr. G. Santayana, of Harvard University, has been promoted to the rank of Assistant Professor. In the same University Dr. R. McDougall, of Western Reserve, has been elected Instructor in Philosophy and Assistant Director of the Psychological Laboratory.

Dr. E. G. Lancaster, of Clark University, has been appointed Professor of Psychology and Pedagogy at Colorado College.

Dr. Norman Wilde, of Columbia University, has been appointed Instructor in Philosophy at the University of Minnesota.

J. F. Brown (Ph.D. Cornell) has been called to Earlham College, Ind., as Vice-President and Professor of Philosophy.

Miss E. A. McC. Gamble, of the Sage School of Philosophy, Cornell University, has been appointed Instructor in Psychology at Wellesley.

The new Gifford Lecturer at Glasgow University will be Professor Michael Foster, Secretary of the Royal Society and Professor of Physiology in Cambridge University.

Dr. Charles De Garmo, President of Swarthmore College, has been elected Professor of the Science and Art of Education in Cornell University. In the same university Dr. David Irons has been appointed Instructor in Philosophy, Mr. I. M. Bentley Instructor in Psychology, and Mr. G. M. Whipple, of Clark University, Assistant in Psychology.

George B. Churchill, a graduate of Amherst, has been elected to the chair of Logic and Rhetoric at Amherst College.